

Sequence Protocol**(1) GENERAL INFORMATION:****(i) APPLICANT:**

- (A) NAME: metaGen - Gesellschaft für Genomforschung mbH
- (B) STREET: Ihnestrasse 63
- (C) CITY: Berlin
- (E) COUNTRY: Germany
- (F) POSTAL CODE (ZIP): D-14195
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(ii) TITLE OF INVENTION: Human Nucleic Acid Sequences from Pancreas Tumor Tissue

(iii) Number of sequences: 633

(iv) COMPUTER-READABLE FORM:

- (A) MEDIUM TYPE: Floppy disk
- (B) COMPUTER: IBM PC compatible
- (C) OPERATING SYSTEM: PC-DOS/MS-DOS
- (D) SOFTWARE: Patentin release #1.0, version #1.25 (EPO)

(2) INFORMATION ON SEQ ID NO. 1:**(i) SEQUENCE CHARACTERISTIC:**

- (A) LENGTH: 1202 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:

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cttcacgat agctaccgct gcttccaacc aaagcaggag ggggccttca cctgctggtc 60
agcagtcact ggcgcccgc atctcaacta tggctcccgg cttgactata ccctggggga 120
caggaccctg gtcatagaca cctttcaggc ctctttcctg ctgcctgagg tgatgggctc 180
tgaccactgc cctgtgggtg cagtcttgag tgtgtcctct gtgcctgcaa aacagtgcc 240
acctctgtgc acccgcttcc tccctgagtt tgcaggcacc cagctcaaga tccttcgctt 300
cctagttcct ctgaacaaa gtccctgtgtt ggagcagtcg acgctgcagc acaacaatca 360
aaccgggta cagacatgcc aaaacaaagc ccaagtgcgc tcaaccaggc ctacgcccag 420
tcaggttggc tctagcagag gccagaaaaa cctgaagagc tactttcagc cctcccctag 480
ctgtcccaa gcctctcctg acatagagct gcctagccta ccactgatga gcgccctcat 540
gaccccgaa actccagaag agaaggcagt ggccaaagtg gtgaaggggc aggccaagac 600
ttcagaagcc aaagatgaga aggagttacg gacctcattc tggaagtctg tgctggcggg 660
gcccttgccg acacccctct gtggggggcca caggagacca tgtgtgatgc gtactgtgaa 720
gaagccagga cccaacttg ggcgcgctt ctacatgtgt gccaggcccc ggggtcctcc 780
cactgacccc tctcccggt gcaattcttc ctctggagca ggcccagctg aaccaatgga 840
ggcctgggga catctggcat ggtcaccctt gcacatgatc tgaggccagc tccccttccc 900
tgagctgcct cctgcttctc cctcaaagtc tctaccctt ctcttctctt tttaagccct 960
ctcttctctg ctttccttcc tacctagctc cttgttggtg agcttcttgt gccttaatcc1020
tgtgaccag ccccttacac cactttccac cttcctgtcc gaagtacacg gacactagct1080
gccccaggaa gttgtgtgat tttaaatac ttctgtcttt gctggaaagt gtatttgtgc1140
ataaataaag tctgtgtatt tgtttcaaaa aaaaaaaaaa aaaaaaagga ggtttgaagg1200
gg
1202

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(2) INFORMATION ON SEQ ID NO. 2:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1072 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:

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cctccatcag ctcgccgcgc agcggctgta tttgcggcct gtgcgagtag gcgcttgggc 60
actcagtcct cctggcgagc gacgggcaga aatctcgaac cagtggagcg cactcgtaac 120
ctggatccca gaaggtcgcg aaggcagtag cgtttcctca gcggcgact gctgcagtaa 180
gaatgtcttt tccacctcat ttgaatcgcc ctcccatggg aatcccagca ctcccaccag 240
ggatcccacc cccgcagttt ccaggatttc ctccacctgt acctccaggg accccaatga 300
ttcctgtacc aatgagcatt atggctcctg ctccaactgt cttagtacct actgtgtcta 360
tggtttgaaa gcatttgggc gcaagaaagg atcatccagg cttaaaggct aaagaaaatg 420
atgaaaattg tggtcctact accactgttt ttgttgcaa catttccgag aaagcttcag 480
acatgcttat aagacaactc ttagctaaat gtggtttggt tttgagctgg aagagagtac 540
aagggtgcttc cggaaagctt caagccttcg gattctgtga gtacaaggag ccagaatcta 600
ccctccgtgc actcagatta ttacatgacc tgcaaattgg agagaaaaag ctactcgta 660
aagttgatgc aaagacaaag gcacagctgg atgaatggaa agcaaagaag aaagcttcta 720
atgggaatgc aaggccagaa actgtcacta atgacgatga agaagccttg gatgaagaaa 780
caaagaggag agatcagatg attaaagggg ctattgaagt tttaatcgt gaatactcca 840
gtgagctaaa tgccccctca caggaatctg attctcacc ccaggaagaa gaagaaggaa 900
aagaaggagg acattttccg cagatttcca gtggccccac tgatccctta tccactcatc 960
actaaggagg atataaatgc tatagaaatg gaagaagaca aaagagacct gatatctcga 1020
gagatcagca aattcagaga cacacataag aaactggaag aagagaaagg ca 1072

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(2) INFORMATION ON SEQ ID NO. 3:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1468 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:

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gcacgaggtta ttatgctgtc gtagggctcc actgcagaaa gcaaaagtaa taagactaat 60
aaaaatatca cctgagaaac ctataacatt ggctgttggt gatggtgcta atgacgtaag 120
catgatacag gagggccatg ttggcatagg aatcatgggt aaagaaggaa gacaggctgc 180
aagaaacagt gactatgcaa tagccagatt taagttcctc tccaaattgc tttttgttca 240
tggtcatttt tattatatta gaatagctac cctgttacag tatttttttt ataagaatgt 300
gtgctttatc acaccccagt ttttatatca gttctactgt ttgttttctc agcaaacatt 360
gtagacagc gtgtacctga ctttatataa tatttgtttt acttccctac ctattctgat 420
atatagtctt ttggaacagc atgtagaccc tcatgtgtta caaaataagc ccacccttta 480
tcgagacatt agtaaaaaacc gcctcttaag tattaaaaca tttctttatt ggaccatcct 540
gggcttcagt catgccttta ttttcttttt tggatcctat ttactaatag ggaaagatac 600
atctctgctt ggaaatggcc agatgttttg aaactggaca tttggcactt tggctctcac 660
agtcatggtt attacagtca caataaagat ggctctggaa actcattttt ggacttggat 720
caaccatctc gttacctggg gatctattat attttatttt gtattttcct tgttttatgg 780
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gtcaagtggg tctgcttggt ttgccataat cctcatggtt gttacatgtc tatttcttga 900
tatcataaag aaggtctttg accgacacct ccaccctaca agtactgaaa aggacagat 960
gtactccaac acagttgctt taagtgcaga gttcatcgca ctgcagccat tgtcgagggc1020
aaggaatcag ctgagcaaac ttagcttact gaaacaaatg caggatcaa gtgcttggac1080
tccatgtgct gtttcccgga aggagaagca gcgtgtgcat ctgttggaag aatgctgga1140
cgagttatag gaagatgtag tccaaccac atcagcaggt gtgaaatctc tctaagtagc1200
ctttgctgca gatgagtatc ctatctggaa caggatgaac ctgccgctct agataccta1260
taaatacgca gctggtttta ccaactgaag caggaagtct gctattttatt agcactcttt1320
ggtggtagat ttcactttgt ggctttgggg taagggtctt ttcactcaca aaggaagaga1380
aagcaccttt gaagagactt catctaatga acaaaaaatt ttgtttcata atctttcta1440
aatgggctca gtaggagtgg gtgtatgg 1468

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(2) INFORMATION ON SEQ ID NO. 4:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 2331 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:

cggtctcgaga	aaggacacct	ccctttttcag	atgcctggca	tgaggcttcc	agaaacccag	60
gttcttccag	gagaaataga	tgagactcct	ctttccaagc	caggacatga	ccttgccagc	120
atggaggata	aaacagagaa	atggtcttcc	cagcctgaag	gtccacttaa	attgaaagct	180
tcaagtactg	atatgccatc	ccagatttct	gtgggttaatg	tggtatcaact	gtgggaagat	240
tctgtcctaa	ctgtcaaatt	ccccaaatta	atggtaccaa	ggttctcctt	ccctgcccc	300
agctcagagg	atgatgtgtt	catccccact	gtgaggggaag	tgcagtgtcc	agaggccaat	360
attgatacag	ccctttgtaa	ggaaagtccg	gggtcttggg	gagccagcat	cctgaaggca	420
gggtgtgggg	tccctgggga	gcagcctgtg	gaccttaacc	tgcttttggg	agctccccc	480
atttcaaagg	tcagagtgc	tattcagggt	gctcagggtg	aaagtcaaga	ggtcactata	540
cacagcatag	tgacaccaga	gtttgtagat	ctctcagtag	ccaggacttt	ttccactcag	600
attgtgcggg	aatcagagat	ccccacgtca	gagattcaaa	caccttcgta	cggattttcc	660
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gcagacagct	gttcagatga	ggagccagca	gaaattcctg	agtttcccc	tgatgatagc	960
caagaggcaa	ccacaccact	ggcagatgaa	ggcagggctc	caaaagacaa	accagaaagt	1020
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gagacagggtg	ttgattccaa	aaatgcagct	cagagatctg	ctcccattca	aacacagcct	1140
gaggcacgac	cagaggcaga	actgcctaaa	aaacaggaga	aggcaggctg	gttccgattt	1200
cccaaattag	ggttctcctc	atctcctacc	aagaaaagca	aaagcaccga	agatggggca	1260
gagctggaag	aacaaaaact	tcaagaagaa	acaatcacgt	tttttgatgc	ccgagaaagt	1320
ttctcccctg	aagagaagga	agagggtgaa	ctgatcgggc	ctgtggggcac	tgggctggac	1380
tccagagtga	tggtgacatc	cgcggcaaga	acagagttaa	tcctgcccga	gcaggacaga	1440
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cagaaatgac	cagaacacct	ttgtcaccat	cacacagccc	tcctaaaatg	gaaccaaaag	1680
ttcccagctc	cctcaaagct	ttggatgcaa	agaaggcacc	ctgacttcca	caagacacca	1740
gaattcacac	ggtaactcaga	ggcactgctg	gggaagtgtg	ttggtcttta	ttagataaat	1800
ttccagagac	ctgtccataa	tacccaacag	aacatgactg	tttctttgag	gaaaggggta	1860
taatgtctgt	ggtgtacaag	tcggttttgg	tataacttct	ttcctgctgc	tgctgcttcc	1920
cggcaaacat	agttttccta	tttcaggcag	agtgcggtat	attccaggaa	acactgtttc	1980
ctaactactt	agcttacttc	tttgttgaat	gcctcactaa	tggcaagttt	caagatgttt	2040
tgggtgacaa	tgcacacatg	ctgggcaaaa	gggtgatggc	cagtggctgg	cagctgggcc	2100
agcagaagct	aggacatctg	tgagttgtca	ttctcatcta	tccatgtcca	ctggcctgcc	2160
agcatccgcc	agtgccttgc	cagtgtgcac	ggtcccacac	tgtggccctt	gagtccccta	2220
atgtacacgc	tgacagcaga	atgcagatgg	agctggcttg	gctgttccct	ggatgggcaa	2280
taaagaaagt	gctgcatccc	aaaaaaaaaa	aaaaagtaaa	aaaaaaaaag	g	2331

(2) INFORMATION ON SEQ ID NO. 5:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1925 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:

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aataaaaaaaaa attgtattta cttagaagca ttcagaatgt caacaaaaca gccgcaattt 60
tttttttgca attacagagt ggtattcagt taacagaaca acaattatct tcgtataagc 120
tgcacagag acaactgaag atgaaaaaaaa taaaacccaa aaagaaaacc aaaagaaaaa 180
aaaaaaaaaa acaaaaaaca aaactaccat ccccatatat aactaatttg tgctgtgcac 240
caacaagaac ctgcttttaa tttccatgcc aatttacaac ccccatactg taccaggcaa 300
ggtagtggtc tattgaaaat accaccagga cagggctatc taaagacaca ttcggtagtg 360
tgtaactat acaaaaaaag acactgtaca gttaaaaaac aaatcttaca cagccttaca 420
tttcaatttt tttcttttaa aggagtgagt tgtgtacagg ggggttaaag gctttataga 480
caagaaaaaa aaaactgcgc tagaaccaac ttattcatca tcatcatctt cttcttcac 540
ttcatcttct tcatcttctt cctcctcttc atcctcttca tcttctcat cttcctctc 600
ttccttcttt ttcttgcttt tttcagcctt gacaactccc ttttttgctg catcaggctt 660
tccttttagc cgatatgcag caatatcctt ttcgtatttt tccttcaact cgcagccttc 720
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aacaccattt taaaccaacc aaaccaaagg tcagaaaaca tgctgccaat tcgtggcttt 1560
gcactagata gggaataaac aagggcctaa gcgagtcgac tcttctaat tatgggacct 1620
taaaaaaaaa aatcaccgtg caccgaaagt ttcaaaaaac accctctttg cataaaactt 1680
tgctccaaaag agggagcagc agccagctcc ggtgctcgga acccggttg gaggtgcggt 1740
gccaccgcga ggcagcctcg tttctatctg gtttgccctt gagatgtatt tctgttctga 1800
ctaaacacgt ccggtctgaa gtttctccga gtaacaagg atgagggaca aaagccactc 1860
ctgctcggtg ctcggtggcc cctccccca actcgggagg tattttttgg agccgtcaaa 1920
gttgg

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(2) INFORMATION ON SEQ ID NO. 6:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1368 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6:

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gtcgggggagc gcgggggccgg ggcccagggg accccggggc acggagagcg ggaagaggat 60
ggattgcccg gccctcccc ccggatggaa gaaggaggaa gtgatccgaa aatctgggct 120
aagtgtctggc aagagcgatg tctactactt cagtccaagt ggtaagaagt tcagaagcaa 180
gcctcagttg gcaagggtacc tgggaaatac tgttgatctc agcagttttg acttcagaac 240
tggaagatg atgcctagta aattacagaa gaacaaacag agactgcgaa acgatcctct 300
caatcaaaaat aagggtaaac cagacttgaa tacaacattg ccaattagac aaacagcatc 360
aattttcaaa caaccggtaa ccaaagtcac aaatcatcct agtaataaag tgaaatcaga 420
cccacaacga atgaatgaac agccacgtca gcttttctgg gagaagaggc tacaaggact 480
tagtgcacat gatgtaacag aacaaattat aaaaaccatg gaactacca aaggtcttca 540
aggagttggt ccaggtagca atgatgagac ctttttatct gctgttgcca gtgctttgca 600
cacaagctct gcgccaatca cagggcaagt ctccgctgct gtggaaaaga accctgctgt 660
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gaaacaggaa gagcgagtag agcaagtacg caagaaattg gaagaagcac tgatggcaga 780
catcttgtcg cgagctgctg atacagaaga gatggatatt gaaatggaca gtggagatga 840
agcctaagaa tatgatcagg taactttcga ccgactttcc ccaagagaaa attcctagaa 900
attgaacaaa aatgtttcca ctggcttttg cctgtaagaa aaaaaatgta cccgagcaca 960
tagagctttt taatagcact aaccaatgcc tttttagatg tttttttgat gtatatatct 1020
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tcaagcagga ccctaagatg aagctgagct tttgatgcca ggtgcaatct actggaaatg 1140
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taaataaatt tcccagttaa agattattgt gacttcactg tatataaaca tttttttata 1260
ctttattgaa aggggacacc tgtacattct tccatcatca ctgtaaagac aaataaatga 1320
ttatattcac aaaaaaaaaa aaaacaccgg gggggggccc gggcccca 1368

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(2) INFORMATION ON SEQ ID NO. 7:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 424 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7:

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gaatgccctt tgggggcccag gggcccctgg gagccccgcc accctttccc acttggccgg 60
ggtgcccgcg gccgccaccc ctgcacgcat ggcaggctgg cccccccca gagecctccc120
cacagccagc agcctttcca cagtcaactgc ccttcccgcg gtccccagcc ttccctacgg180
cctcaccgcg acccctcag agcccagggc tgcaaccctt cattatccac cagcacaga240
tggtacagct ggggctgaac aaccacatgt ggaaccagag aggggtcccag gcgcccagg300
acaagacgca ggaggcagaa tgaccgcttg tccttgccctg accagctggg gaacaaccct360
ggaccgaggc atcgggccagg acccatagag caccgcgttt ttccctgtgc ccttttgaa420
attg                                         424

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(2) INFORMATION ON SEQ ID NO. 8:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1020 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 8:

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caagtaaattg cagcactagt ggggtgggatt gaggtctatgc cctgggtgcat aaatagagac 60
tcagctgtgc tggcacactc agcggctctg gaccgcatcc tagccgccga ctcacacaag 120
gcaggtgggt gaggaatcc agagtggcca tggagaaaat tccagtgtca gcattcttgc 180
tccttgtggc cctctcctac actctggcca gagataccac agtcaaacct ggagccaaaa 240
aggacacaaa ggactctcga cccaaactgc cccagaccct ctccagaggt tgggggtgacc 300
aactcatctg gactcagaca tatgaagaag ctctatataa atccaagaca agcaacaaac 360
ccttgatgat tattcatcac ttggatgagt gccacacag tcaagcttta aagaaagtgt 420
ttgctgaaaa taaagaaatc cagaaattgg cagagcagtt tgtcctcctc aatctgggtt 480
atgaaacaac tgacaaacac ctttctcctg atggccagta tgtcccagg attatgtttg 540
ttgacccttc tctgacagtt agagccgata tcaactggaag atattcaaac cgtctctatg 600
cttacgaacc tgcagatata gctctgttgc ttgacaacat gaagaaagct ctcaagttgc 660
tgaagactga attgtaaaga aaaaaaatct ccaagccctt ctgtctgtca ggccttgaga 720
cttgaaacca gaagaagtgt gagaagactg gctagtgtgg aagcatagtg aacacactga 780
ttaggttatg gtttaattgt acaacaacta ttttttaaga aaaacaagtt ttagaaattt 840
ggtttcaagt gtacatgtgt gaaaacaata ttgtatacta ccatagttag ccatgatatt 900
ctaaaaaaaa aaataaatgt tttgggggtg ttctgttttc tccaaaaaaaa aaaaaaaaaa 960
aaaaaaaaaa aaaaaaaaaa aaaaattgcc ccaagggga cgggttacaa ttggggggcg1020

```

(2) INFORMATION ON SEQ ID NO. 9:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 718 base pairs

(B) TYPE: Nucleic acid

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

(A) ORGANISM: HUMAN

(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 9:

```

tgaaaaagta aactacattt cctagcgtgc ccgtgtcttg cttccggctg acgtgtcttt 60
caggaagagg agctggtgag aagacagcga aatggcgctt ccggcccccg gcccggcctc120
cggcggctcc ggggaggtag acgagctgtt cgacgtaaag aacgccttct acatcggcag180
ctaccagcag tgcataaacg aggcgcacgg gtgaagctgt caagcccaga gagagacgtg240
gagagggacg tcttcctgta tagagcgtac ctggcgca ga ggaagtctcg tgtggtcctg300
gatgagatca agccctcctc ggcccctgag ctccaggccg tgcgcatgtt tgctgactac360
ctcgcccacg agagtcggag ggacagcatc gtggccgagc tggaccgaga gatgagcagg420
agcgtggacg tgaccaaacac caccttcctg ctcatggccg cctccatcta tctccacgac480
cagaaccggg atgccgccct gcgtgcgctg caccaggggg acagcctgga gtgcacagcc540
atgacagtgc agatcctgct gaagctggac cgcctggacc tcgcccggaa ggagctgaag600
agaatgcagg acctggacga ggatgccacc ctcaccagc tcaaggtctt ggtaagcttg660
caacgggtgt aaaagctcaa ggatccttct gatttcaggg attggtaaaa ttgttcca 718

```

(2) INFORMATION ON SEQ ID NO. 10:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1202 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 10:

```

gcaggaccgt cattgacgcc atgagcgcgc tgctgcggct gctgcgcacg ggtgccccag 60
ccgctgcgtg cctgcggttg gggaccagtg cagggaccgg gtcgcgcgct gctatggccc 120
tgtaccacac tgaggagcgc ggccagccct gctcgcagaa ttaccgcctc ttctttaaga 180
atgtaactgg tcactacatt tcccccttc atgatattcc tctgaagggt aactctaaag 240
aggaaaatgg cattcctatg aagaaagcac gaaatgatga atatgagaat ctgtttaata 300
tgattgtaga aatacctcgg tggacaaatg ctaaaatgga gattgccacc aaggagccaa 360
tgaatcccat taaacaatat gtaaaggatg gaaagctacg ctatgtggcg aatatcttcc 420
cttacaaggg ttatatatgg aattatggta ccctccctca gacttgggaa gatccccatg 480
aaaaagataa gagcacgaac tgctttggag ataatgatcc tattgatgtt tgcgaaatag 540
gctcaaagat tctttcttgt ggagaagtta ttcatgtgaa gatccttgga attttggctc 600
ttattgatga aggtgaaaca gattggaaat taattgctat caatgcgaat gatcctgaag 660
cctcaaagtt tcatgatatt gatgatgtta agaagttcaa accgggttac ctggaagcta 720
ctcttaattg gtttagatta tataaggtac cagatggaaa accagaaaac cagtttgctt 780
ttaatggaga attcaaaaac aaggcttttg ctcttgaaat tattaatcc actcatcaat 840
gttggaagc attgcttatg aagaagtgtg atggaggagc tataaattgc acaaacgtgc 900
agatatctga tagccctttc cgttgacacg aagagggaagc aagatcatta gttgaatcgg 960
tatcatcttc accaaataaa gaaagtaatg aagaagagca agtgtggcac ttccttggca 1020
agtgattgaa acatctgaaa ttctgctgtc aagattccca tctctaagga ctccaagtgc 1080
tagagacaag ggggtctatg agcatttact gacttcctgt taaaacttca ttttttcaa 1140
ctttttgagc tatgcaatat ataaataaac agtaagaatt ttaaattaaa aaaaaaaaaa 1200
aa

```

(2) INFORMATION ON SEQ ID NO. 11:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1610 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 11:

```

ggagccggga ctcgcgggcg gcgggcgggg gcgtcgctgc gcggctggcc ggtgaggccg 60
cgcatgggg cgagtgcagc tcttcgagat cagcctgagc cacggccgcg tcgtctacag 120
ccccggggag ccgttggtg ggaccgtgcg cgtgcgcctg ggggcaccgc tgccgttccg 180
agccatccgg gtgacctgca taggttcctg cggggtctcc aacaaggcta atgacacagc 240
gtgggtagtg gaggagggtt acttcaacag ttccctgtcg ctggcagaca aggggagcct 300
gcccgtgga gagcacagct tccccctcca gttcctgctt cctgccactg caccacgctc 360
ctttgagggt cctttcgga agatcgtgca ccaggtagg gccgccatcc acacgccacg 420
gttttccaag gatcacaagt gcagcctcgt gttctatata ttgagccctt tgaacctgaa 480
cagcatccca gacattgagc aaccaaacgt ggcctctgcc accaagaagt tctcctacaa 540
gctggtgaag acgggcagcg tggctctcac agccagcact gatctccgcg gctatgtggt 600
ggggcaggca ctgcagctgc atgccagcgt tgagaaccag tcaggcaagg acaccagccc 660
tgtggtggcc agtctgctgc agaaagtgtc ctataaggcc aagcgtgga tccacgacgt 720
acggaccatt gcggaggtgg aggggtgcggg cgtcaaggcc tggcgcgggg cgagtgga 780
cgagcagatc ctggtgctg ccttgccccca gtcggccctg ccgggtgca gcctcatcca 840
catcgactac tacttacagg tctctctgaa ggcgccgga gctactgtga ccctcccgtt 900
cttcattggc aatattgctg tgaacctatg cccagtgagc ccccgccagg gcctggggct 960
gcctcctggg gccccacccc tgggtgtgcc ttccgcacca cccaggagg aggctgaggc1020
tgaggctcgc gctggcgcc cccacttctt ggaccccgct tctctctcca ccaagagcca1080
ttcgcagcgg cagccctgc tggccacctt gagttctgtg cctggtgcgc cggagccctg1140
ccctcaggat ggcagccctg cctcacaccc gctgcaccct cccttgtgca tttcaacagg1200
tgccactgtc ccctactttg cagagggtc cggggggcca gtgccacta ccagcacctt1260
gattcttcct ccagagtaca gttcttgggg ctacccttat gaggccccac cgtcttatga1320
gcagagctgc ggcgcgctg aaccagcct gaccctgag agctgacccc gtgctgcctt1380
ctccaggcag gcctggcctc tgccctggga ctggggcgcc cagggcctcg tgccttctct1440
cttggcctag cctggccac tcaggacctg cccagcctct gccagctcct ctgcatccgc1500
cctcttctcc ctggggctgg ggtgggggtg gcaggagct gggacctgga gagacaactc1560
ctgtaataaa aacactttat ttgtagaaaa aaaaaaaaaa aaaaaaaaaa 1610

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(2) INFORMATION ON SEQ ID NO. 12:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 2155 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 12:

cacgcaagga	tgaggcgggg	tttcgccgtg	gcgcgcgatgc	gtgcagcaaa	gaatggagga	60
gtcggaaacc	gaacggaagc	gggctcgcac	cgacgagggtg	cctgccggag	gaagccgctc	120
cgaggcgga	gatgaggacg	acgaggacta	cgtgccctat	gtgccgttac	ggcagcgccg	180
gcagctactg	ctccagaagc	tgctgcagcg	aagacgcaag	ggagctgcgg	aggaagagca	240
gcaggacagc	ggtagtgaac	cccggggaga	tgaggacgac	atcccgctag	gccctcagtc	300
caacgtcagc	ctcctggatc	agcaccagca	ccttaaagag	aaggctgaag	cgcgcaaaga	360
gtctgccaag	gagaagcagc	tgaaggaaga	agagaagatc	ctggagagtg	ttgccgaggg	420
ccgagcattg	atgtcagtga	aggagatggc	taagggcatt	acgtatgatg	accccatcaa	480
aaccagctgg	actccacccc	gttatgttct	gagcatgtct	gaagagcgac	atgagcgcg	540
gcggaagaaa	taccacatcc	tggtggaggg	agacgggtatc	ccaccaccca	tcaagagctt	600
caaggaaatg	aagtttcctg	cagccatcct	gagaggcctg	aagaagaaa	gcattcacca	660
cccaacaccc	attcagatcc	agggcatccc	caccattcta	tctggccgtg	acatgatagg	720
catcgctttc	acgggttcag	gcaagacact	gggtgttcacg	ttgcccgta	tcatgttctg	780
cctggaacaa	gagaagaggt	tacccttctc	aaagcgcgag	gggccctatg	gactcatcat	840
ctgcccctcg	cgggagctgg	cccggcagac	ccatggcatc	ctggagtact	actgccgct	900
gctgcaggag	gacagctcac	cactcctgcg	ctgcgccctc	tgcattgggg	gcatgtccgt	960
gaaagagcag	atggagacca	tccgacacgg	tgtacacatg	atgggtggcca	ccccggggcg	1020
cctcatggat	ttgctgcaga	agaagatggg	cagcctagac	atctgtcgct	acctggccct	1080
ggacgaggct	gaccgcatga	tgcacatggg	cttcgagggg	gacatccgta	ccatcttctc	1140
ctacttcaag	ggccagcgac	agaccctgct	cttcagtgcc	accatgccga	agaagattca	1200
gaactttgct	aagagtggcc	ttgtaaagcc	tgtgaccatc	aatgtggggc	gcgctggggc	1260
tgccagcctg	gatgtcatcc	aggaggtaga	atatgtgaag	gaggaggcca	agatggtgt	1320
cctgctcgag	tgccctgcaga	agacaccccc	gcctgtactc	atctttgcag	agaagaaggc	1380
agacgtggac	gccatccacg	agtacctgct	gctcaagggg	gttgaggccg	tagccatcca	1440
tggggggcaaa	gaccaggagg	aacggactaa	ggccatcgag	gcattccggg	agggcaagaa	1500
ggatgtccta	gtagccacag	acgttgcttc	caagggcctg	gacttccctg	ccatccagca	1560
cgtcatcaat	tatgacatgc	cagaggagat	tgagaactat	gtacaccgga	ttggccgcac	1620
cgggcgctcg	ggaaacacag	gcacgcccac	taccttcac	aacaaagcgt	gtgatgagtc	1680
agtgtctgat	gacctcaaa	cgctgctgct	agaagccaag	cagaaggtgc	cgcccgtgct	1740
gcaggtgctg	cattgcgggg	atgagtccat	gctggacatt	ggaggagagc	gcggctgtgc	1800
cttctgcggg	ggcctgggtc	atcggtcac	tgactgcccc	aaactcgagg	ctatgcagac	1860
caagcaggtc	agcaacatcg	gtcgcaagga	ctacctggcc	cacagctcca	tggaacttct	1920
agccgacagt	cttcccttct	ctccaagagg	cctcagtcct	caagactgcc	accagtctac	1980
acatacagca	gccccctgga	cagaatcagc	atttcagctc	agctggcctg	gaatggggca	2040
ggctggctct	ggctgcctgt	tccctgtgct	cttcagaatt	actgtttttg	tttcctttta	2100
ccccagctgc	cattaaagcc	caaacctcta	gccccaaaaa	aaaaaaaaaa	aaaaa	2155

(2) INFORMATION ON SEQ ID NO. 13:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1743 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 13:

```

cctgggcggg cctgcgctca ggttgagtt tcaacttttag ctctgggcac ctccagctcc 60
tgctcgccgg acggctccca gggagagcag acgcgccaga cgcgccaccc tggggcgcc 120
gacggtcacg gagcatgggg tgggcctttg agcgggtagt ccggagagtg gtccaggagc 180
tggaacctgg tggggagttc atccctgtga ccagcctgca gagctccact ggcttccagc 240
cctactgcct ggtggttagg aagccctcaa gctcatggtt ctggaaaccc cggtataagt 300
gtgtcaacct gtctatcaag gacatcctgg agccggatgc cgcggaacca gacgtgcagc 360
gtggcaggag cttccacttc tacgatgcca tggatgggca gatacagggc agcgtggagc 420
tggaagcccc aggacaggca aagatcgagc gcggggccgc ggtgtctgac agctccagca 480
cctcaatgaa tgtgtactcg ctgagtgtgg accctaacac ctggcagact ctgctccatg 540
agaggcacct gcggcagcca gaacacaaag tcctgcagca gctgcgcagc gcggggacaa 600
cgtgtacgtg gtgactgagg tgctgcagac acagaaggag gtggaagtca cgcgcacca 660
caagcgggag ggctcgggcc ggttttccct gcccgagacc acgtgcttgc aggggtgagg 720
ccagggccat ctgagccaga agaagacggg caccatcccc tcaggcagca ccctcgcat 780
ccgggtggcc cagctggtta ttgactctga cttggacgtc cttctcttcc cggataagaa 840
gcagaggacc ttccagccac ccgcgacagg ccacaagcgt tccacgagcg aaggcgctg 900
gccacagctg cctctggcc tctccatgat gaggtgcctc cacaacttcc tgacagatgg 960
ggtccctgag gagggggcgt tcaactgaaga cttccagggc ctacgggcag aggtggagac 1020
catctccaag gaactggagc ttttgagcag agagctgtgc cagctgctgc tggagggcct 1080
ggagggggtg ctgcgggacc agctggccct gcgagccttg gaggaggcgc tggagcaggg 1140
ccagagcctt gggccggtgg agcccctgga cgggtccagca ggtgctgtcc tggagtgcct 1200
ggtgttgtcc tccggaatgc tgggtgccga actcgctatc cctgttgtct acctgctggg 1260
ggcactgacc atgctgagtg aaacgcagca caagctgctg gcggaggcgc tggagtgcga 1320
gaccctgttg gggccgctcg agctggtggg cagcctcttg gagcagagtg ccccggtggc 1380
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tgctgggagc cgcaggccca gggccgcatg tgtgcactct acgcctccct ggcactgcta 1560
tcaggactga gccaggagcc ccactagcct gtgcccgggc atggcctggc agctctccag 1620
cagggcagag tgtttgccca ccagctgcta gccctaggaa ggccaggagc ccagtagcca 1680
tgtggccagt ctaccatggg gccccaggag tggggaaaca caataaaggt ggcatacgaa 1740
gga

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(2) INFORMATION ON SEQ ID NO. 14:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 970 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 14:

```

cggtcgcagt gggtttttag tttgttcctt ctttttgaag tcccttcatt tcaatccttg 60
actctctctc cccttccctt gccagctct gttgaatgct gctgtgcgcg tgtgagggcc120
gctctgcaca cagggccctt gggttgtgtg aactgaaatt ctccctgtat ttgtgagact180
cgcaggagtc cccatctgta gcacaggcaa tgccagtgcc atgctgcagc ctcagaaacc240
aggcctctca ctccagcagc aggcagaacc gtgtctgtgg tcgggtgctg tccacagctc300
tgtctgcctt gttcttgggc ttgagctgga tagagggtgg gtctcttcac cttccctgaa360
ttcagaacag accctgtgcc tggccccagt gtgcccaggc aattccccag gccctcattg420
ggagcccttg gtgttctgag cagcagggcc caggcagcac atgagcagtg cccaggggct480
ccctgcgtga ggacggcaag gtgcgatgta tgtctaactt attgatggca ggcagcccc540
tgtgccccct aagcctggcc ctggttattg ctgagctctg tgctcagtgc tgcggcctgg600
ccgtggctcg tctgttcctt tggggggccc gggcgggttg tgggaatcag tcttcacaga660
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cgggggtggg gggggcaagg aggggcaggc acacaccatg tctgacctga acccgattct780
ggggagcatc ttcccgctcc ggccccacga cctccacagg gttacattgt aatatatatg840
ccccagctaa cctgtctgat ggtggcatct tcctgcagac atttcaaca tgtaactttt900
atatgaaaaa aaataaacac agatgaaagc tgcccaatgc caaaaaaaaaa aaaaaaaaaa960
aaaaaaaaaa                                     970

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(2) INFORMATION ON SEQ ID NO. 15:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 2003 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 15:

```

gagagatctg aaataacctt tcccagtgagg cagggttgcc aggggttgagg ggacagcaca 60
taccaccccc acccaacctg ttcgaggggc cctgcatggc acgggatgag tccctgccct 120
gtgcagctgc ctggcagtggt ctgggacaag gatcttgag ccagcacaga ggcctcttca 180
aaggcctctc cctcttgga ctccaggcaa ggcaggtgcc cgcttcccca acacctccag 240
gcagtgacct tagggcatgc cccagcaggt ctccgagcag cactggggac ccgtctcagc 300
acatcctggc ctttgaaagt ctgatatacct gagaggaggg cagggttttag ggccgcagtt 360
ccagccagcg tccccagcct ggcttccctg ccatggactc agtagctcgt ggggcttctt 420
accacccacc agccccgctg ggggtgcggc tggtgtgagg caaaggagga cttgcctgga 480
gatttgagag aagattcctt ctaccagggc tgctgagggg ccaggcctgc atcaggggct 540
aggctctggc tgggcccga ggctgagact aaggctttcg accctgggtg ctcctatgtg 600
atgctgcctc agacaaaggc agtgagcctt ccctgccaaa gtgcccattc catgggctcg 660
gcctcactgg tcaactgttag cccatgaaca cgtgtggggc tcggtcacgt ggctttgagg 720
gcagtctgac caggctagac cacacgtgcc gtgacagggg gtgccattcc cctcgcaggc 780
tctaattgtc ccacatgtag cctggcagtc caaagaccaa gaatcaactt gcaaactctg 840
cattaaactg ctgtgcgact tcaggcatat cactgccttc tctgggcttc agtgtccttt 900
tcatacctag aagtctgcgg tctgaggctc tttgggttca gacacactgt tctaggcttc 960
tgtaggggac cttgtgatct gccgtgcccc tcttccctgt tcttttctgt cctccccacc 1020
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cagccaccca ggtgccattt ccagtctgac ttccagaaat gtgcaccatg tcctagagca 1140
cagacccatt ggctggagcc tcctgggagg gttcaaacca tcagctctat gagaaatgcc 1200
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gtggtttctc ctccaattca gacccaagag gtagcccccg agggcatgta cctgggtggg 1320
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tcctctgcgt cccaggtttg gacgtctagg gtttggtgtg cctgtcttct gccctccctg 1560
agcccacagg gtcagtcaat gtatcttcta cgtgcctctc cctctgcctt ctctcacagt 1620
gcccccggtc ccagagctca ggggttaggg ttctcctgag ggtgcagggg atccttctca 1680
tctcctggac cctccagggc actctgggtc ctattcccca gctcctaggc agctgagccg 1740
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ctggacccct gccaggtctg tggacatggt tatatgcccg ggagaggggg gtgcagggcc 1860
ccagggatgg ccccaatcc cacctctgtt tattctgtaa actgcaacct ataaataacc 1920
tttagcatte ctattgtaac aaaattaatt tttatgaaat aaattatatt tcctagtcta 1980
ataaaaaaaaa aaaaaaaaaa aaa

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2003

(2) INFORMATION ON SEQ ID NO. 16:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 2279 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 16:

```

gattgaatta agcccttggg tttgccccac tgcagcttca agcggaaagg aaggaaccag 60
ttggaccagt ggtcacagac ccaagcaaaa ggcgaccgca atcagcagct gggcttcacc 120
cctttcctct gaaccagtga cccaaacctt tcacctcga ttgggcaacc ttggcctggg 180
gcatgtttat caccactgaa gtgacttgca gctatcaaag accagttaga ggggtgtgcag 240
caagcacttt ctgagggtgc ccccatccca gaagaggaca cagacactga agaaggatgat 300
gactttgaac tacttgacca gtcagagctg gatcaaattg agagtgaatt gggacttaca 360
caagaccagg aagcagaagc acagcaaaat aagaagtctt caggtttcct ttcaaactctg 420
ctgggaggcc attaatctag gaatcagctt gcaacagagc acaaaaaaca ccaaaaaaat 480
ttcaaacaaa aaaaaaaaaa aaaaaaggaa aagaaaaaaa ttgaactgta agctttaatg 540
attactttag atttgtttta tttccctcc tgcagtgaat taattggata tatatcagct 600
gacactgata gattgatatt tctgatcgtt attttttgtt aataagcatg gaaatgaact 660
ttatacacac cactgtgttg tcagagataa atattagggg ttgtttttta agcaaaaaga 720
aaaaaacaaa aaccaaaacta ttaaaatcct cctataaata ttctttttct ttacagtttt 780
tcaagcatgc aaacagttt attgtaactt actgaaaaat attaacaatt aattgtgaat 840
acatgtgtgt accagcttcc ttattcctaa tacctggaaa attttttttt caacggatag 900
attttgatgt aaaaaagacc gaaattatca aggtatctta gttgaaggac ttgggaaata 960
ctatcaaaat taatttctta ggaaaaaatt taaaagtata tttaagtact ctggatagac 1020
tgaaacgttt ccatgttatt tctgcagttg tagacttagg cttatttgta aagaagcatg 1080
ctccattgac tgccatctct agtcttgcat tgggtgggtat taaccocatag aaagcaagcat 1140
gttgtgtatc acatagacaa tgggttatgat gtaaacagat tcagttgttt tgttgttcat 1200
tcgtcatatg tttgtgatag ggatgttggg agcacagctc tattctgcct gtcagacttt 1260
aagttagacc cttatctttt atattatgtc atgaaaaaag tctcctaaaa ttgtgaaact 1320
agttcttgat gagtgatgtg atcatcagca ataaagatat aataactctg tttcttagct 1380
ctgtatagag gagaggaaact tgcttggtt taaaatatat ttatttgcca tttaagtata 1440
aatatgaaat ctgtttctta ttgggaagat agaatatata tattttcctt taaacttttt 1500
aaggtcactt ttaaataacc aaatttgatt tatggttttt aacaaaggac taaagagctg 1560
aaaccaacct agttttgttt ttgtgatata aactttaagt gtcgagggac catgccagca 1620
actacaaaa atctcttaaa tcttcaggta cagctggcat tttggcagat gcatagagac 1680
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tttcatttta tcccttatat ttctaaagac taattataag taatctgaca ttttaatgta 1800
gctactctta tttatttttt cttcttgagg tattaataaata tctggactga gttttgcca 1860
atgttaaagg gagaagagtt actgaagact ttgaacactt gctttttgtg attgcttatg 1920
tcattagtgc ctcatgactg tgtttgatgt cctttattga tacaaagtga gcctgtgcct 1980
tcattatctt gcccttttta atacaaatgg aaacctggtg tttgaaaatc tctgaactgt 2040
gtgggttttg gaggaatata cctgaatttt attcaataac agtttctgga caggaagaaa 2100
aatacagtta catatttata aaatagtcgt tatcagtatt tttttatgtg tatgtttctt 2160
tctttaaaac aatattcttg gatataaagt agaaaagttt aaaggtcatt tccatttctt 2220
cactaaggag aaaaaaagtt aaataatcca agtaattaaa gatataagtc actagatga 2279

```

(2) INFORMATION ON SEQ ID NO. 17:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 761 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 17:

```

aaatcttagg gtaagccagc tgccttggaa gccaccagg gctccagact gcaggggaaga 60
agccgggagc aggcagccat acctccactc ttgtcctcaa ggactcagct gtgtggcctt120
ggatttcttt ttgcgggact tgcgccctgc aggacactgg tgttggagtt ggagggctcct180
atcctgcca ggggtgactc ccagggttgc agggggatag ggtggagaag ggtgctgtag240
cccttgagg cgtgaagtc tttctgctct cttagcctat tacattagga gtagcttacc300
tttgggtgcc aacggtccag gatcccccta aaatgggatg gggataattc aggaatcagc360
ctgggttggc acagggggcg tattccttgg agaggcagga ctcacacaca cccatccaga420
tcagtgtagc ttctccctta ggaagcctct aggacatccc ccatgttaga gtccacatca480
gcaaagctgc tctgcccttg gctactttca cttgggctac ctgcttggg ctacttccac540
tagctgcaac cctgggacgc atgggagggg aggggtgtga cctcaggaa cagtgtggtc600
cttggagggg ctagacagac cctgagcatc accaccccag ttattgtgac cccacgtttc660
caccatcag cctcctgggg tctctgcctg tgtgaacagt agggcccaac ctggaaccag720
atggtacggc catgccggtc ctgcaggag ctcatgcctg g 761

```

(2) INFORMATION ON SEQ ID NO. 18:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1403 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

(A) ORGANISM: HUMAN

(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 18:

```

gggtggctttg cctgggtgct gggcctgcgt tctctggctg cttgetgcoet gtgtgcgttc 60
cttgggtggct ttggcttctg cactccttgg tcgtcaccgc tcaggtoctc cattcacacg 120
aggtcctcct cgctctggcc gctcttgctg ctccgtctctg aagaaatcag actgatttcc 180
tcttaagact cctagggatg tggggaagag ctgggactca agtgcagtc acggtgtgaa 240
acatgaggga ggtgaggtgt ccgtccactt ccccataaaa ggtgtgcatt tcagttaggc 300
tgccccgcca cagagcaggc ttcattctgt ctgccatcca gccccatctg gatgtgaggt 360
ggggtggaga catcatgggg tgattgcaga aagggggagt ggcggccccc gcagcttctg 420
ctgaggagct gaccgctctg agctgttctg ttctgtattg ctgctctgtg tctgcatgta 480
ttgtgaccgt gcggctccac ctcttccagc tgctgtctaca gctgaggcct ggatcccggc 540
ctttccctgt gacttacgtg tctgtcaccg gcaggcagcc ctacaaatcc tggtgacctg 600
ctctcccaag aacagagcct gtcccagat gtcccagtag cgatgagtaa cagaggtggc 660
tgtggacttc ctctacttct ccttgctgga tcagggcctt cctgcctccc gctgggcagg 720

tctggccttg ctctcttggc agggcccccag cccctctgac cactctgcag ctccacctgc 780
agctgatgcc aaagtgtgtg tgtccagtgt gcagcagccc tgggagccac tgccaccttc 840
agaggggttc cttgctgaga cccacattgc ttcacctggc cccaccatgg ctgcttgcoet 900
ggcccaacct agcgttctgt gccatgctag agcttgagct gttgctcttc ttcaggggag 960
gaaatagggg ggagagcggg aagggctctg ctccctaagt ttgctgctgt ggcttttttg 1020
ccttctccaa agacgcactg ccaggcccca agcttcagac tgctgtgctt agtaagcaag 1080
tgagaagcct ggggttttga gccacacctac tctctggcag catcagcate ctactcctgg 1140
caacatcagg ccaacgtcca cccagcctc acattgccag atgttggcag aagggctaata 1200
attgaccgtc ttgactggct ggagccttca aagccactgg gatgtcctcc aggcacctgg 1260
gtcccatgac cagctccccg tctccatagg ggtaggcatt tcactggttt atgaagctcg 1320
agtttcatta aatatgttaa gaatcaaaac tgtctttgtt caggctgcta taacaaaaat 1380
ataatagcct ggggtggctta aac
1403

```

(2) INFORMATION ON SEQ ID NO. 19:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1702 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 19:

```

gggccgcacc ggagtgtcgg tggatgatgg catcccgagc gtgcggcgcg aggtgcactc 60
gtacctgact gacactctgc actcgtcat ctccgagctg agcccgagg agaaggagga 120
ctcgggtcatc gtggtgctga tgcggagac tgactcacag tacacttcgg cagtgcacaga 180
gaacatcaag gccttgttcc ccacggagat ccattctggg ctccctggagg tcatctcacc 240
ctccccccac ttctaccctg acttctcccc cctccgagag tcctttgggg accccaagga 300
gagagtcagg tggaggacca aacagaacct cgattactgc ttctcatga tgtacgcgca 360
gtccaaaggc atctactacg tgcagctgga ggatgacatc gtggccaagc ccaactacct 420
gagcaccatg aagaactttg cactgcagca gccttcagag gactggatga tcctggagtt 480
ctcccagctg ggcttcattg gtaagatgtt caagtcgctg gacctgagcc tgattgtaga 540
gttcattctc atgttctacc gggacaagcc catcgactgg ctccctggacc atattctgtg 600
ggtgaaagtc tgcaaccccg agaaggatgc gaagactgtg accggcagaa agccaacctg 660
cggatccgct tcaaaccgtc cctcttccag cacgtgggca ctcaactctc gctggctggc 720
aagatccaga aactgaagga caaagacttt ggaaagcagg cgctgcggaa ggagcatgtg 780
aaccggccag cagaggtgag cagagcctg aagacatacc agcaattcac cctggagaaa 840
gcctacctgc gcgaggactt cttctgggcc ttcacccctg ccgcggggga cttcatccgc 900
ttccgcttct tccaacctct aagactggag cggttcttct tccgcagtgg gaacatcgag 960
caccgggagg acaagctctt caacacgtct gtggaggtgc tgcccttcga caaccctcag 1020
tcagacaagg aggccttgcg ggagggccgc accgccacc tcgggtacct tcggagcccc 1080
gacggctacc tccagatcgg ctcttcttac aaggagtg gtaggggaga ggtggacccal 1140
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attctgagcg agatcttctt gaaaaaggcc gactaagctg cgggcttctg agggtaacct 1260
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gatacggccc cgcccaaagg gttctgcctg gcgtcgggct tgggcgggccc tggggtccgc 1380
cgctggcccc gagggcctag gagctggtgc tgcccccgcc cgccggggcc cggaggagga 1440
aggcgggccc cacactgtgc ctgaggcccc gaaccgttcg caccgcgctt gccccagtc 1500
ggccgtttta gaagagcttt tacttgggcg cccgcccgtc ctggcgcgaa cactggaatg 1560
catatactac tttatgtgct gtgtttttta ttcttgata catttgattt tttcacgtaa 1620
gtccacatat acttctataa gagcgtgact tgtaataaag ggttaatgaa gaaaaaaaaa 1680
aaaaaaaaaa aaaaaaaaaa aa

```


(2) INFORMATION ON SEQ ID NO. 20:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 802 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 20:

```

tttttttttt ttttttttca ttttcaaaag ggcttttatt aaattctccc cacacgatgg 60
ctcctgcaat ctgccacagc tctggggcgt gtcctgtagg gaaaggccct gttttccctg120
aggcggggct gggcttggtc atgggtccgc ggactggcgc tgettggcgc cctggcgtgt180
gtctagctgc ttcttgccgg gcacagagct gcggggctctg ggggcaccgc gagctaagag240
caggctctgg tgcaggggtg gaggcctgtc tcttaaccga caccctgagg tgctcctgag300
atgctgggtc caccctgagt ggcacgggga gcagctgtgg ccggtgctcc ttcctaggcc360
agtccctggg aaactaagct cgggcccttc tttgcaaaga ccgaggatgg ggtgggtgtg420
ggggactcat ggggaatggc ctgaggagct acgtgtgaag agggcgccgc tttgttggct480
gcagcgccct ggagcgccct tctcctgagc ctcagtttcc ctttccgtct aatgaagaac540
atgccgtctc ggtgtctcag ggctattagg acttgccctc aggaagtggc cttggacgag600
cgtcatgtta ttttcacaac tgcctgcga cgttggcctg ggcacgcat ggaatggccc660
atgtccctct gctgcgtgga cgtcgcggtc gggagtgcgc agccagaggc ggggccagac720
gtgcgcctgg ggggtgagggg aggcgccccg ggagggcctc acaggaagtt gggctcccgc780
accaccaggc agggcgggct cc                                     802

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(2) INFORMATION ON SEQ ID NO. 21:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1647 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

(A) ORGANISM: HUMAN

(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 21:

```

accccttctc ttttcttttc cctttttctt tttctttttt gggtaagggt gacaccccat 60
ttattggaga agaccccagc acccgcccc tgaggtctta agggctttgg tgtatccttg 120
gtcacgagcg ctgggccagg aagcagagtt cctgagagcc aagtctagtg gttgagagag 180
gacctgggct gggcctgggg agcaggaagc catctgtcca gctgggcagc ccccatgggt 240
ccctgggtgca gccccggcca tgtgtccagc gcccatact ccatgagggg ggtctgcacc 300
ccatcacacg ctggttctgc aggtctgcac ccctgtgagg ctgcccctgg ggggcatggg 360
ttctgttggg ctcttgctcc cagcatggat gacccagcga tagcagtcag tgatgcgctt 420
gttgggtgca tggggggcac agcgggtgca gtacacgatg ccagtgcaa gcaggaccac 480
caaaaagaca cacgttgga ccaggagtgc caccagcagc caccggtcat ccctctggct 540
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cagccacagg gccaaacttg gactggggcc atcttccctt gggatttggg gggctttgga 660
atggggatgt gtagggctga tgggtgaggt ctgggttagtg gggctctgag agggcaggag 720
ggtggggagg gctgcgggct ggggtggcagc aggcacagag atttgatggg caggagacac 780
aggggacctg gaggtgggtg tcagagaggg ctgggcagtt gggataatgg gaagctgggt 840
ggcctggggt ctgaggacaa gggcatctgg ggcttgaggg ggtcgctggg caccgagggt 900
ggtgaccaga ggggcatggt taggtgggat tccaggcaaa tgagtgggtg tctgggtgcc 960
agcgacccgg gtgtctggaa acatggggga ctggtgggca gggaagagct ccggatattt 1020
ggttgagatc atagggggct ggtgggcagg aggctgtgct gaatgagaga cagagagaat 1080
accgggttg taggcagaag gcagatctgg atagtggct gcgatcacgg ggatctggtg 1140
gtcacgggac aaagctgggt gtgtggcagg gatcacagga ggctgggtgg cagaaggcag 1200
tgtgggatgc gtggcagaga ccaccacagg ccgggtgacg gagagcactg aggagtggta 1260
ggggacctg ggggcactga gcgggggtgg ccagggtggc tccgggtagg gtatctgtgg 1320
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tgggcaccca tggcccctgc agggctgcag ctgatgccat cagcctccag ctcatgtccc 1560
tcgctacaat aacactcgaa gccaccaacg tagttgacac acatctgctg gcacacaccg 1620
gcaatctggc actcatctgt gtccaca
1647

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(2) INFORMATION ON SEQ ID NO. 22:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1170 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 22:

```

cctcgctggc agaagagata gaatcagggc tgccccaca gagtgggacc caaggggcta 60
attggaggca cgaggggacc cctccccagg gccttttctt cctctgcgtc ttccatctac 120
tgaaatggga gagggggtgg ggagcttctg ttctggtgaa gggacccggg caggccccc 180
gcaccccatg ctgacttgga gaaccccaga tctctggggc ccagccaggc aggggtgtgg 240
ggcagctgtg ccaatctacc tcacaggccc acccctgcc gggcatgccg tgggatcatg 300
ggcaggggaa gctctggggg tcggagacac cgctgcttag cccccccagc cagaacaccc 360
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aaggagacga gcgcttcgcc ttgattctcc gagaagctc cgagaagtgc tttaagtgtg 480
tttgcattgc ccaggcggtg ggcagcgggg gcctgtccag cctctcccgc ccatccttcc 540
ccaagtgcag tccactgcct tgtcaccagc gacctgcctg tcatgcccac cccctgagga 600
agcatgggga ccctaacacc ctggtgccct gcaccagaca ggccgtggtc aggccaggc 660
caccggccgg gttctgccac agcttcccac gtgcttctgt acatgcgtgt gcctgtgtgt 720
ggtgtctgtt gctgtgtcgt gaaactgtga ccatcactca gtccaaacaa gtgagtggcc 780
ctcgaggcca cagttatgca actttcagtg tgtgtcataa cgacgtcact gctttttaaa 840
ctcgataact ctttatttta gtaaaatgcc caggagtcct ggaagctacg cggacttgca 900
gaggttttat tttttggcct tagaatctgc agaaattagg aggcaccgag cccagcgag 960
cagcctcgga cccggattgc gtttgcccta gcgatatgt ttatacagat gaataaaaaa 1020
tgtttttttc tttgggcttt ttgcttcttt ttcccccc ttctcacctt cccttctccc 1080
cgacccacc ccccaaaaaa gctacttctt cattccgtgg tacgattatt ttttttaact 1140
aaaggaagat aaaattctat attcttaaaa
1170

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(2) INFORMATION ON SEQ ID NO. 23:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1259 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

(A) ORGANISM: HUMAN

(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 23:

```

ggagtatcca gataggcgac acgccggcgg gcggtgagg cgggaatggc tgctgtactg 60
cagcgcgctcg agcggtgtgc caatcgagtc gtgcgtgtgt tgggctgtaa cccgggtccc 120
atgacctcc aaggcaccaa cactaccta gtggggaccg gcccaggag aatcctcatt 180
gacactggag aaccagcaat tccagaatac atcagctgtt taaagcaggc tctaactgaa 240
tttaacacag caatccagga aattgtagtg actcactggc accgagatca ttctggaggc 300
ataggagata tttgtaaaag catcaataat gacactacct attgcattaa aaaactccca 360
cggaatcctc agagagaaga aattatagga aatggagagc aacaatatgt ttatctgaaa 420
gatggagatg tgattaagac tgaggggagcc actctaagag ttctatatac ccctggccac 480
actgatgac acatggctct actcttagaa gaggaaaatg ctatcttttc tggagattgc 540
atcctagggg aaggaacaac ggtatttgaa gacctctatg attatatgaa ctctttaaaa 600
gagttattga aaatcaaagc tgatattata tatccaggac atggcccagt aattcataat 660
gctgaagcta aaattcaaca atacatttct cacagaaata ttcgagagca gcaaattctt 720
acattatttc gtgagaactt tgagaaatca ttacagtaa tggagcttgt aaaaattatt 780
tacaagaata ctcttgagaa tttacatgaa atggctaaac ataatctctt acttcatttg 840
aaaaaactag aaaaagaagg aaaaatattt agcaacacag atcctgacaa gaaatggaaa 900
gctcatcttt agtttcagat taaagaaagc tttgttttat tttgctttga gagaatggta 960
tgttttctta actatagggt attttataga gaataaaaa gtataaaaaca ttaaaaataa1020
ccctagatat actttaaaat aatgttatat ttatgctaaa atatgtaaat tacactatac1080
aaccatatga taggttattt ctctaacctt gtcttctaac gttttaccaa aaattcataa1140
tctaatagtt tatcagtttt caatagatta aataaaatga ttactttaaa aataataaaa1200
tttatctaata ttaagttga aaaaattttt ggccgtagt tatctattac tagtgatca 1259

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(2) INFORMATION ON SEQ ID NO. 24:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1021 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 24:

```

gcgttctctc tccggccctc ggtcaccgcc agcacgcgcc tgetteccgt ctgcgcgagt 60
ccacgcagct cccagggccc ttcaccagca cagcagcagc aggcattggca gcaagcgtgg 120
agcagcgcca gggcaccatc caggtgcagg gccaggccct cttcttccga gaggccctgc 180
ccggcagtg gaggctcgc ttctctgtac tgctgctgca tggatttcgc ttctcctccg 240
agacctggca gaacctgggt aactgcaca ggctggccca ggctggctac cgggctgtgg 300
ccattgacct gccaggctctg gggcactcca aggaagcagc agccccctgcc cctattgggg 360
agctggcccc tggcagcttc ctggcggtct tggatgatgc cttggagctg ggccccccgg 420
ttgtgatcag tccatcactg agtggcatgt actccctgcc cttectcacg gcccctggct 480
cccagctccc gggctttgtg ccagtggccc ccattctgcac tgacaaaatc aatgctgcca 540
actatgccag tgtgaagact ccagctctga ttgtatatgg agaccaggac cccatgggtc 600
agaccagctt tgagcacctg aagcagctgc ccaaccaccg ggtgctgac atgaaggggg 660
cggggcacc ctgttacctg gacaaaccag aggagtggca tacagggtct ctggacttcc 720
tgcaggggct ccagtgaagc ccagcactgc tgcagggggt gggctgcctg cctgctctga 780
gctctctctt gcacgctctc tcttctctcc caggctctgg ctcatgcaca tgcaacaggt 840
gcgtctgtct atatgtctgg gttctgtct tttgtggtct gtttgtcttt tctacctctt 900
tctcttgacg tgatagactg agggggtaaa atcaagagga aaaaactctc aggaatcaag 960
gaacataatc ctgtggaggg taaaccatta catgaggctt ctcccgggtc gttcaagttt 1020
c
1021

```

(2) INFORMATION ON SEQ ID NO. 25:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1407 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 25:

```

agcaaagggtt gccggagacc aagatcggaa gcgtgaaata cgaaggcatc gagttcattt 60
aactgaaaac cggctcaagg agcaaggcca tcaggactca gcttttataa aaacaagagg 120
agtgcacttt tgttttgttt tggtcttttt ggaactgtgc ctgggttgga ggtctggaca 180
gggagccag tccccggccc catagtgttg cgggcactgg acccccgggc cccacggagg 240
ccgcggtctg aactgctttc catgctgcca tctggtggtg atttcggtca cttcaggcat 300
tgactcaagg cctgcctaac tggctgggtc gtttcttcca tccgacctcg tttcttttct 360
ttcctatggt cttttgttca gtgaatatcc ctagagctcc taccatatgt caggccctat 420
gcctcaccct gagaacgcag tgggcataag gtggacctgt ttgctgggaa ccccagggtc 480
cccccttttc ttccctactct gtgcctggag catcatgtcc acccctgcag atccttgga 540
aagaaaatgt ttatgttgca gggatttgca tggtcacgag tgagggcagg cccctgggga 600
cacatctgcc cacagctgca caggccaggg cgcaggcaca tctgttggtt ctcaggcctc 660
agataaaacc atctccgcat catatggcca gtgaccgctt tctcccttca agaaaattct 720
gtggctgtgc agtactttga agtttttaatt attaacctgc ttttaattaaa gcagtttcct 780
ttcttataaa gtggaatcac caaatcttat cacacagagc acagtcctgt agttaccag 840
cccgtccag cagtgcggga gattgtaagg aagcgggtgc ggctggtgaa gcaagtctca 900
catgtcggcg ttcttgcca atggatacaa agataaagaa aatgttgctt ttttctagga 960
actgtcagaa atcctcatgc ctttcaagac ttctgtgaat gacttgaatt ttttattccc 1020
tgcttagggt ctgtgaacga ggctgtctc ttccctgggg tttctttcca tggcctttat 1080
ttctcctctt ccagtgggag ttttgaggc tcttctctgt ggaaacttca cgagcggttg 1140
ctgggcctcg gcttcgctgg agtgtaactc aggggtgaagg cagagtggga tttgagaccc 1200
aggttaggca cgaccaggc tgagaaggga cgtttccatc attcacagt ccctccccac 1260
agcactacct cagcccgagc cccaccctca ctctacccc acccccgcat cgtcaggggt 1320
gccacgggtg gccggagggt gcccgcgcgg ggcttggtcc tggtgccggg ccctgaaaaa 1380
gcttttcccc ttttgaaatt caagcac
1407

```

(2) INFORMATION ON SEQ ID NO. 26:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 286 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 26:

```

ctctcggtc cgctggcag cagctccgcc gccagaggc gtccgagacc ctccgactcg 60
tggttacgca taggcctcgc cagcgagcct tgcccaggca acgagtcgcc agcccccccc120
ctcgccgcgg gctaggtctc acctcgccac cagtacgtct tggacaagta gtgccaggtc180
tgatgccggg tgtggtgagt gccgcccggg cccaggtgcg ccgctcgat gaggtccccgg240
cgtcgctccg gtcgcagcac cacctccagc tccgcgaagg tcttgc 286

```

(2) INFORMATION ON SEQ ID NO. 27:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 815 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 27:

```

cgctcggtt gcaactgggtg ctggacagcc gacgcaacta caaatggggc ggagtttcgg 60
cactggagca gctaatttgc atataggaat gagctccac aaacacgaga agttccagca120
agttcgccac ttccggttct cctggctatc caatagcatc gagtggagca tccccggaag180
tgaggcagcg gaggacgacc tttttccggt tccggcctgg cgagagtttg tgcggcgaca240
tgaaactgct taccacaaat ctgctgagct cgcagtgtgc gggggtgggg tcccgtggct300
tccccctgcg cctccaggcc accgaggtcc gtatctgccc tgtggaattc aacccaact360
tcgtggcgcg tatgatacct aaagtggagt ggtcggcggt cctggaggcg gccgataact420
tgcgctctgat ccaggtgccg aaagggccgg ttgagggata tgaggagaat gaggagtttc480
tgaggacctat gcaccacctg ctgctggagg tggaagtgat agagggcacc ctgcagtgcc540
cggaatctgg acgtatgttc cccatcagcc gcgggatccc caacatgctg ctgagtgaag600
aggaaactga gagttgattg tgccaggcgc cagtttttct tgttatgact gtgtattttt660
gttgatctat accctgtttc cgaattctgc cgtgtgtatc cccaaccctt gacccaatga720
caccaaacac agtgtttttg agctcggtat tatatatatt tttctcatta aaggttttaa780
acaaaaaaa aaaaaaaaaa aaaaaaaagt cgacg

```

815

(2) INFORMATION ON SEQ ID NO. 28:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 548 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 28:

```

tttctcgaac cttctctttt cttctctttt tgcactgtgc aaatatattg actttatttg 60
tctcctttca ggagcctcac agacatatcc aggtaaaaag atcgttaaat aaatgccttc120
agccatcgca atgcaaaaaa aaatatcaat cctccagacg cagtagcagc cgcgctgcgc180
ccaaagtccc aacggccacg cctaacaatt ataaaagtgt tcagcgagag tgttggcggt240
agtgtgaatg ggtgtgcgct ggggggcacg gtggagcggt gtgcaaaate ggagttgcaa300
accatcggac aagggcattg agtggtacc cgccgccgac tcagcgcggg cgcgctccc360
cgcacacact cacagcagag ttcgcaactg gaagagttaa aaaataaaca tttaacagga420
cgaggaaagc ggccccgctc cggcgctcc cgggccaggg cgagcgcggc gagggcgca480
ccgaccggtt cgcagcgggg cgggagtcg aagcgcgcca ggagcgggcg gtcccgggtc540
cttgcggg

```

548

(2) INFORMATION ON SEQ ID NO. 29:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 493 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 29:

```

gcaagatggc tgcctgaca gcggagattt tgcagcactc cagagcctgc tcaaggcctc 60
ctcgaaagat gttgtcagac agctgtgtca agaaagcttt tccagttcag cccttggctt120
gaaaaaactc ttggatgtta catgttccag cttgtctgtg acccaggagg aggcagaggal80
actgctccag gctctgcacc gcctcactag gctgggtggca ttccgtgacc tgcctctgc240
cgaggcaatt ctggctctct ttccagaaaa ttccaccaa aacctcaaaa acctgctgac300
aaagatcatc ctagaacatg tgtctacttg gagaaccgaa gccaggcaa atcagatctc360
tctgccacgc ctggtcgatc tggactggag agtggatatc aaaacctcct cagacagcat420
cagccgcgatg gccgttgccc cacctggcct ggttccagat ggaaggttcc aaggaggttc480
ccaggctatg ggg                                     493

```

(2) INFORMATION ON SEQ ID NO. 30:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1063 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN

(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 30:

```

cgctccccc tccaactctc aaccacttc tccagccagc gccccagccc tcccgcgcgc 60
cgctcgcagg tcccaggagg cgcagactgt gtccctgaca atgggaacag ccgacagtga 120
tgagatggcc ccggaggccc cacagcacac ccacatcgat gtgcacatcc accaggagtc 180
tgccctggcc aagctcctgc tcacctgctg ctctgcgctg cggccccggg ccaccagggc 240
caggggcagc agccggctgc tgggtggcctc gtgggtgatg cagatcgtgc tggggatctt 300
gagtgcagtc ctaggaggat tttctacat ccgcgactac accctcctcg tcacctcggg 360
agctgccatc tggacagggg ctgtggctgt gctggctgga gctgctgcct tcatttacga 420
gaaacggggg ggtacatact gggccctgct gaggactctg ctacgctggg cagctttctc 480
cacagccatc gctgccctca aactttggaa tgaagatttc cgatatggct actcttatta 540
caacagtgcc tggcgcactc ccagctcgag tgactggaa actccagccc cactcagag 600
tccagaagaa gtcagaaggc tacacctatg tacctccttc atggacatgc tgaaggcctt 660
gttcagaacc cttcaggcca tgccttggg tgtctggatt ctgctgcttc tggcatctct 720
ggccctctcg tggctgtact gctggagaat gttcccaacc aaagggaata gagaccagaa 780
ggaaatgttg gaagtgaagt gaatctagcc atgcctctcc tgattattag tgcctgggtc 840
ttctgcaccg ggcgtccctg catctgactg ctggaagaag aaccagactg aggaaaagag 900
gctcttcaac agccccagtt atcctggccc catgaccgtg gccacagccc tgctccagca 960
gcacttgccc attccttaca ccccttcccc atcctgctcc gcttcatgtc ccctcctgag 1020
tagtcatgtg ataataaact ctcatgttat tgttcccaaa aaa 1063

```

(2) INFORMATION ON SEQ ID NO. 31:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 472 base pairs

(B) TYPE: Nucleic acid

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

(A) ORGANISM: HUMAN

(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 31:

```

cggctcgagg cggcgcgatg gcggcggggc tggcgcggct cctgttgctc ctccgggtct 60
cggccggcgg gccgcgcgcg gcaggtgcag cgaagatgaa ggtggtggag gagcccaacg 120
cgtttggggg gaacaacccg ttcttgccctc aggccagtcg cctccaggcc aagagggatc 180
cttcacccgt gtctggaccc gtgcactctc tccgactctc gggcaagtgc ttcagcctgg 240
tggagtccac gtacaagtat gagttctgcc cgttccacaa cgtgacccag cacgagcaga 300
ccttccgctg gaacgcctac agtgggatcc tcggcatctg gcacgagtgg gagatcgcca 360
acaacacctt cacgggcatg tggatgaggg acggtgacga ctgccgttcc cggagccggc 420
agagcaaggg ggagctggcg tgtgcgagcc cgagcaactg cgtctaaggg gt 472

```

(2) INFORMATION ON SEQ ID NO. 32:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 2568 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 32:

```

catctctctg cagtgccttc ctgcctgtg cagcccgccg acccacaggc tcacccctcc 60
tgccgggtgc cagaagcccc ctccagcagg gcctctctcc gtggccccag cttcactctc 120
tccctcagca catgccctgc tggaggcccc agccctccgt ggacagcagg ggccacgtgg 180
agcccgggcc gctcaccgcg gaccagtgct tggccgcctt cttggtgcca aaccccttc 240
ccccacccag agactgggca gctgtgtctg gttegttctt tgcactaacc acatttgta 300
tctctagggc aggtctgggc tgcgggtgga gggggaccgc tggcaccccc cttccctccc 360
ttcttggttc catttccatc catgacaggt acagcatccc aggagcccgg cctgaggggc 420
tggacccgag ccggctgtga acatccctca gcccctgtg tcccccttg ggactaacca 480
ctaacctcac ccccaaactc cacgggtgcc cctagctggc ccagagccgg cagtgtgagc 540
ccaagtccgg gctggagccg aggcgggagc agctgtctgg gactcaaggc tgcagtagec 600
tttcttcatg ggggtgctca ggggtgcca cagaccgaca ggcagcccaa gggcctggac 660
acccctcccc aggcaggtgc tgccccagga ggactgtcct cgggaatgaa cctcccgccg 720
gctttggact gaggtccctg tggcctcggt ctccctccca tgaagtggga gcgaggctcc 780
ccaatggtgc ttttgcttt agtgtacgat gttgtctgtg cttcccgccg tggagggcag 840
agccacccca catcaggatc ggacgtgcta cccctcccg tcccggccct ggcccagcca 900
gcccagccct cagaggtcga tgctgtgcc aaggccaggg gcagccagag ggcagctgga 960
tggccacgtg caggggtcaa ggctggggcc tgcagtgggg cgggcccgca gcccagcag 1020
tttacagacg catggctctt cctccagag cagccggcag ctacctggac cggaaatgtc 1080
ctcatccctt ccctggggcc aggtctgtgc ctggccttcc tctgtgaacc cctcctttct 1140
ttgtgctggt gtctgggacc aaaaaggggg aatatgggag ggcagagtgg ggaggggagt 1200
ccatgggcct ggggccccaa gccggggcgt ctgagctccc caggcatgac caaacctcag 1260
tggagggggc tctgcttcag gcccgcctg gctgacattc tgagccccc tcggaggccc 1320
cgccacagcc aacctgcca gtcttctct tgggcttgac ccgcccagga gttctccagg 1380
cctagggcca ggagagaggc cctggcacc tggcgtgggt gcccgccaaa gccctgcgal 1440
ccgctcagaa gcacaaatgc tgtccatggc cgtcaggtgc cctgccaggt gaatggacat 1500
agcgtgagag gcggtgaggc cagggcttcc agcctcgtgc tgtctcgga ctctgaccg 1560
tgggtgtgct gtgtgcccgt ctgtgacttt ctactacca aggttgaaga aaggaaacgg 1620
ggaaaatcaa aaggggttca aacccacct cagtaggtgg aggggagcgc ctgccattgg 1680
ttgtattttt gttctgagtt ttccgtgccg tgttcctaac tactccatcc catgacctcg 1740
ccacacctac tggggcatct ggctgggtgcc tgctgccatg gccagcccc actctcacc 1800
tgcacagggg gtcttgagc cccagggccc acagcctcgt tgggaggaca ggggtggcc 1860
ggggacaaga gggaggagcc caggggctta cctcactgag agtgctcccc agcaggcatc 1920
cactacccca gggcccccca catgtcatgg caaggttggg agtgaatggg cctggttggg 1980
agcagccctt ggccattgc ccaccaccc atctcactat gcaattcgag ttccaagcaa 2040

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catttgcctcc tgccttgggg ccagctctgc ccagccctg agaggggtgg tgaggcagcc2100
ccctggaccc cagaaccca gacaagggg caggcgggg accagggcct ctctgtggg2160
atctttgttt tgtgtttaac cataatggt gtgtactgaa ccaattcata tttgttatat2220
ataatatata tatatataat ctcttaaga ctgagctcc tggtttacc ccccgccctg2280
ggcatctgac ctccccacc ccagtgtgat ttaacatcca ggaactgagg cctgaaccat2340
tttgcatttc cccctctcc agcctctgta gggccatggc tgtatgtact gtcgctgtgt2400
ttttttgttt ttttagaact gggtttggg gctgattttt atttctttgg gggctttttt2460
tcttggcaaa tactaaaaat ctgctcaatg taatttctgt ggtttctatt cagcttgggt2520
ttcatgtttt aaaataaatt ttaaaaagca aaaaaaaaa aaaaaaaa 2568

```

(2) INFORMATION ON SEQ ID NO. 33:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 239 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 33:

```

cgcgatggcg gcggggctgg cgcggtctct gttgctctc gggctctcgg ccggcgggccc 60
cgcgccggca ggtgcagcga agatgaaggt ggtggaggag cccaacgcgt ttgggtgagc120
agcctcgcg gctggcggt cgagcgggg acggcccgg cccgttcccc gctgaccttg180
ccgcttccc taggtggaac aaccggttct tgcctcaggc cagtcgctc caggccaag 239

```

(2) INFORMATION ON SEQ ID NO. 34:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 482 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

(A) ORGANISM: HUMAN

(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 34:

```
ctccaagctt ggccctggcca acactcggta ggcagaatga tcacctccgt tgtttcaggt 60
actctgtgtt tatttatgca acagttcatg taaaatggag acgaggccag aagaatcctt120
gagcagacag agccagttgg gcctcctaag tgaccttaac cttgcttgat ttgcaagcat180
gtctgaaact ttatttggtg tatttcttgt aaatgcctat gttaaagaaa cacagaactt240
aagctcaacc aatcagaagc agccaacaaa aacgtaatta gtaactagga cttcctcatg300
ggatagacca aataaggcaa ctgtataact gtgtaactgt ataactgtaa ccaatgaaat360
attatctttg cttttatcta tttgtcctaa aaagcctcct cctcatgttc tctctgggga420
gctccctagc cacttctgga tcaactgtca aataaactct taaatatttt aaaaaaaaaa480
aa
```

482

(2) INFORMATION ON SEQ ID NO. 35:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 641 base pairs

(B) TYPE: Nucleic acid

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

(A) ORGANISM: HUMAN

(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 35:

```

gagagcagta ggtgtagca gcttggtcgc gacaggggcg ctaggtagag cgccgggacc 60
tgtgacaggg ctggtagcag cgcagaggaa aggcggcttt tagccaggta tttcagtgtc120
tgtagacaag atggaatcat ctccatttaa tagacggcaa tggacctcac tatcattgag180
ggtaacagcc aaagaacttt ctcttgtcaa caagaacaag tcatcggcta ttgtggaaat240
attctccaag taccagaaaag cagctgaaga aacaaacatg gagaagaaga gaagtaaacac300
cgaaaatctc tcccagcact ttagaaaggg gaccctgact gtgttaaaga agaagtggga360
gaacccaggg ctgggagcag agtctcacac agactctcta cggaacagca gcactgagat420
taggcacaga gcagaccatc ctctgtctga agtgacaagc cacgctgctt ctggagccaa480
agctgaccaa gaagaacaaa tccaccccgag atctagactc aggtcacctc ctgaagccct540
cgttcagggt cgatatcccc acatcaagga cggtgaggat cttaaagacc actcaacaga600
aagtaaaaaa atggaaaatt gtctaggaga atccaggcat g 641

```

(2) INFORMATION ON SEQ ID NO. 36:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 381 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 36:

```

aagttgatga cctacgctct tactttctgt tgccaggagt aactgaaagc aaacaccaca 60
gtctgttgtt tattagcttt taaaggcttg tcaacattcc ttgttaacaa tttctttttg120
ggtagccttt tataaaatgc gtaggtgatg agtgatccag cagacaaggc ggctcgagcc180
gattcggctc gagcggctcg aggtaaaaga aaaaaaaatg tggaggaaaa catggcctac240
tcagctttga tggaagtggc tggttactgc ttaatagaga gaatgctttg gaatcctatg300
ttgaaaataa aaagtgtttg gttgtgcagt tatgcggtca tggtcattcc cagacagttg360
gctaagggtt agtggtcctc t 381

```

(2) INFORMATION ON SEQ ID NO. 37:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1539 base pairs
- (B) TYPE: Nucleic acid

(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

(A) ORGANISM: HUMAN

(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 37:

ctggggacag	gaagcccctg	taccattatg	gtcggggcat	gaatcccgt	gacaaaccag	60
cctgggcccg	agaggtaaaa	gagagaacaa	ggatgaacaa	gcagcagaac	tctcccttgg	120
ccaagagcaa	gccaggcagc	acggggcctg	agccccccag	cccccaggcc	tccccagggc	180
ccccaggcct	cccctgggcc	cccaaaccct	accacaaatt	catggccttc	aagtcctttg	240
ccgacctccc	ccaccgccct	ctgctggtcg	acctgacagt	agaggagggg	cagcgggtca	300
aggatcatcta	tggctccagt	gctggcttcc	atgctgtgga	tgctcgactcg	gggaacagct	360
atgacatcta	catccctgtg	cacatccaga	gccagatcac	gccccatgcc	atcatcttcc	420
tccccaacac	cgacggcatg	gagatgtgc	tgtgtctacga	ggacgagggt	gtctacgtca	480
acacgtacgg	gogcatcatt	aaggatgtgg	tgctgcagtg	gggggagatg	cctacttctg	540
tggcctacat	ctgctccaac	cagataatgg	gctgggggtga	gaaagccatt	gagatccgct	600
ctgtggagac	gggccacctc	gacgggggtct	tcatgcacaa	acgagctcag	aggctcaagt	660
tctgtgtgta	gcggaatgac	aagggtgttt	ttgcctcagt	ccgctctggg	ggcagcagcc	720
aagtttactt	catgactctg	aaccgtaact	gcatacatgaa	ctggtgacgg	ggccctgggc	780
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cgtgacctct	gacccctgat	gctttcgtga	tcacgtgacc	atcctcttcc	ccaacatgtc	960
ctcttcccaa	aactgtgcct	gtccccagct	tctggggagg	gacacagctt	ccccttccca	1020
ggaattgagt	gggcttagcc	cctccccctt	tttctccatt	tgagaggaga	gtgcttgggg	1080
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gtcaggggag	ccggctcccc	ccttgaatgt	accagaccct	gggggggggc	actgggccct	1200
agatttttgg	ggggtcacca	gccactccag	gggcagggac	catttcttca	ttttctgaaa	1260
gcactttaat	gattccctctg	ccccaaact	ccagggaatg	gaggggggag	cccgcagcc	1320
aaaacatgcc	ccccattccg	gacccccctc	tcctcttcta	gccccatgcc	ttccccgggt	1380
gagggaggga	gcagggagcc	ctcactctcc	acgccccttg	cttgcatccg	catatagtgt	1440
gagcagcaag	taacccttct	cctccttccc	cagtcacccc	tcctcaatgt	agtggccttg	1500
aattgtcttt	attaacaaac	aggatatcca	aggtcgagc			1539

(2) INFORMATION ON SEQ ID NO. 38:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 2195 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 38:

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gctccgagga aggcctgtgg gagtctcgga gacgtgtctg tctgtgaggc gctgggtgca 60
cgccccagg gctctgggct aggaaggcag cggcgagggt cctccccacg taccctcgc 120
gggccagcc gagcaacgtg gggcggaagg ggcggcgaag gcccgggctg ggagcggttg 180
cgcccgaggt cccagccatg gcggagtctg tggagcgcct gcagcagcgg gtccaggagc 240
tggagcggga acttgcccag gagaggagtc tgcagggtccc gaggagcggc gacggagggg 300
gcgccggggt ccgcatcgag aagatgagct cagagggtgg ggattcgaat ccctacagcc 360
gcttgatggc attgaaacga atgggaattg taagcgacta tgagaaaatc cgtacctttg 420
ccgtagcaat agtaggtgtt ggtggagtag gtagtgtgac tgctgaaatg ctgacaagat 480
gtggcattgg taagttgcta ctctttgatt atgacaagggt ggaactagcc aatatgaata 540
gacttttctt ccaacctcat caagcaggat taagtaaagt tcaagcagca gaacatactc 600
tgaggaacat taatcctgat gttctttttg aagtacacaa ctataatata accacagtgg 660
aaaactttca acatttcatg gatagaataa gtaatggtgg gttagaagaa ggaaaacctg 720
ttgatctagt tcttagctgt gtggacaatt ttgaagctcg aatgacaata aatacagctt 780
gtaatgaact tggacaaaca tggatggaat ctggggtcag tgaaaatgca gtttcagggc 840
atatacagct tataattcct ggagaatctg cttgttttgc gtgtgctcca ccacttgtag 900
ttgctgcaaa tattgatgaa aagactctga aacgagaagg tgtttgtgca gccagtcttc 960
ctaccactat ggggtgtggtt gctgggatct tagtacaaaa cgtgttaaag tttctgttaa1020
atthttgtac tgtagttttt taccttggat acaatgcaat gcaggatttt tttctacta1080
tgtccatgaa gccaaatcct cagtgtgatg acagaaattg caggaagcag caggaggaat1140
ataagaaaaa ggtagcagca ctgcctaaac aagaggttat acaagaagag gaagagataa1200
tccatgaaga taatgaatgg ggtattgagc tggatatctga ggtttcagaa gaggaactga1260
aaaatttttc aggtccagtt ccagacttac ctgaaggaat tacagtggca tacacaattc1320
caaaaaagca agaagattct gtcactgagt taacagtggg agattctggg gaaagcttgg1380
aagacctcat ggcacaaatg aagaatatgt agataatgga ctgggatata ttgtatttct1440
catgttaaag cctcttccct tgaaattaaa aaaaaatttt aactgataaa acttagggca1500
acattaatta atgtatatct ttacctgaat tgttatactt tttgaaaatc ctgtgacttg1560
cctgtttctc cccgctccaa cgaaatcatt aactctccta aaatgtgttt cattctagta1620
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gttttggcct tttggagtgg ggggaaggaca aatctgatcc tgtaatcttt ttctttccag1740
taatcccttg tgtctgttgc atgaggacat ggacaataaa gtagtatatg atcctcagat1800
acaggggagaa ggacaaggca tacagcttat tgattagagc tggcaagcat ctgctcatta1860
tgthttggaat tgctttctat aagaaaattg cccactacta ctaacttgat caacaatgaa1920
ttcaaaatag ttaacctatg aaataacatc ctctcaaatg tttgctgatg aagtacaagt1980
tgaaatgtag ttattggaag agtctgtaac ctgtggatca tataatattca aagttagaca2040
aaggcaataa aaaagcagct attttcatga atagaaaaaa aaaaaatttc aggaagtata2100
aatttatattc tgcaccgaac aaggaacaga aattattgca tctgtggaag catatatctg2160
ggagttacta ttactttact ggaagggccca agggc
2195

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(2) INFORMATION ON SEQ ID NO. 39:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1409 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 39:

```

gtttgctgtc cttttttaaa ggattccaag ccatgtgaaa ttcccttctg gatgtgattc 60
tgggtcgcaa gtccttattt atatgtgagg ctggggaatg ggctgggggt attggcagtc 120
cttttgccagg gcagtgtgtg tgggtgggggt acaccgctgt ggcttagccc aagacactcc 180
cagaggaaaa cactgcagaa ggaactgggt tgcagactgt ggaaggatct gcagttttgt 240
ttttgaccaa aaaaataata ataagtttag tctgaagggc agagggaata cccaagcccc 300
tgatgcctat gagaagtccc tggacttcaa cctcctgtt gtttggcctt agcccagagg 360
gagctgctca cctgagcacc cttgggggtg ggcagagagg caggggtgga ttttagagtt 420
agtgtctgtg cgggggcagc cctgagcctg gaggttgagac tttggggtct cttagtttgg 480
aggtgttgag tgcatttgtg cccctgcctg gttgagagct tcttggtaac tcttgccacc 540
ccttctcact gccctgaccc aacccactg gaccttgatg ctgcgaggag tgggtgcctg 600
acggactcag cactcccgcc tgatgtattg gatcatagga gagcacttgc tctcctgcct 660
ctgccaggag agggcttgtt cctccaactc taggaggcca ggcaagcatg gacaggagcc 720
aaggagcag ggtcattaac ttttcttctt ttgcaaagtg ggcacttggc atcagggtcc 780
caatcaccag aaagcaccaa agcccctggc accccaccca ctccatccta cccagggacc 840
ccaagtaggc aactgttatg gcagtgggtc cagcccaggc cagcactgcc agcctcctct 900
ccctgcagta ggcaccagct ctacctcccc cggcaggcaa tgtcctggtt tctcagccca 960
gcaccatctg ttccctaga cttctcaggg gccagcccag tctggggcac cctttgtttc1020
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ttggatgctg ccttacatcc ccttctagcc ctctcccat ccacacacac aggcacccac1140
ccacaccagg tcggcttgtt tctcacatgt agggagagag gggagaccaa cccctttgtg1200
tcttttgaaa tacgaagaaa aatgtgtgtt caggagcatg actccagtgc tgcgctcttg1260
ggcctagttc agtctgtctt gtctcaaate taggcatttt tgcttcaatt ttattttttt1320
taaaacattt ttttgggtgt cccgttggtt ttggaataat ttggctaaca ttggtaaaag1380
gtaagggggg taaaatataa ggtaattttt
1409

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(2) INFORMATION ON SEQ ID NO. 40:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1084 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 40:

```

ggaatcttta agcaatcata cggggaaaaa gggcccatca ccttcaaagg agccacaatt 60
agactcctca acagacatga ttgaggctgg aagataaggg aatggtatct tcttcaaagc 120
cgaaagaata ggaccacacc tgccaggatt tgggtgttta aatataaatc tgatcacccc 180
cctgcttaga acccttctgc tttctattac ccctcattta aaatgtaaac tcttcacctt 240
ggtttatgag aactggttct tgccttcccc ttgaacctca ttaaattggtg atttcttgct 300
aagctccagc ccgagtgggc tcctctcagc ttctaatttt gtgctctttc ctgccctttt 360
cctgggcctt ctcagctctc cccccccacc actcttgact caggtggtgt ccttcttctt 420
caagtcttga caattcccgg gcccttcagt ccctgagcag tctacttctg tgtctgtcac 480
cacatcttgt cttttccctt cattgcattt attgcagttt atatatatgc tacttttact 540
tgttcatttc tgtctccctt accaggctgt aaatgagggc agaaaccttg tttgttttat 600
tcaccatcat gtaccaagtg cttggcacat agtgggcctt cattaaatgt ttgttgaata 660
aaagagggaa gaaggcaagc caaccttagc tacaatccta ccttttgata aaatgttcct 720
tttgacaata tacacggatt attatttgta ctttgttttt ccatgtgttt tgcttttatc 780
cactggcatt tttagctcct tgaagacata tcatgtgtga gataacttcc ttcacatctc 840
ccatggtccc tagcaaaatg ctaggcctgt agtagtcaag gtgctcaata aatatttggt 900
tgggtggttt gtgagccttg ctgccaaagc ctgcctttgg gtcgacatag tatggaagta 960
tttgagagag agaacctttc cactcccact gccaggattt tgtattgcca tcgggtgccal020
aataaatgct catatttatt aaacaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa1080
aaaa
1084

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(2) INFORMATION ON SEQ ID NO. 41:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 2860 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 41:

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tcttggtga ttcttttctt ggcagttccc cttatgaggg ttacaactat ggctcctttg 60
agaatgtttc tggatctacc gatggtctgg ttgacagcgc tggcactggg gacctctctg 120
acggttacca gggccgctcc tttgaaccgg taggtactcg gccccgagtg gactccatga 180
gctctgtgga ggaggatgac tacgacacat tgaccgacat cgattccgac aagaatgtca 240
ttcgaccaa gcaataacct tatgtggctg acctggcacg gaaggacaag cgtgttctgc 300
ggaaaaagta ccagatctac ttctggaaca ttgccaccat tgctgtcttc tatgcccttc 360
ctgtggtgca gctggtgatc acctaccaga cgggtggtgaa tgtcacaggg aatcaggaca 420
tctgctacta caacttcttc tgcgccacc cactgggcaa tctcagcgcc ttcaacaaca 480
tcctcagcaa cctggggtag atcctgctgg ggcgtgcttt cctgctcatc atcctgcaac 540
gggagatcaa ccacaaccgg gcctgctgc gcaatgacct ctgtgccctg gaatgtggga 600
tccccaaaca ctttgggctt ttctacgcca tgggcacagc cctgatgatg gaggggctgc 660
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acgccagcgc ctacagtgcc tacgcctgcc tggccattgt catcttcttc tctgtgctgg 840
gcgtggtctt tggcaaaggg aacacggcgt tctggatcgt cttctccatc attcacatca 900
tcgccaccct gctcctcagc acgcagctct attacatggg ccggtggaaa ctggactcgg 960
ggatcttccg ccgcatactc cacgtgctct acacagactg catccggcag tgcagcgggc 1020
cgctctacgt ggaccgcatg gtgctgctgg tcatgggcaa cgctcatcaac tggtcgctgg 1080
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tctgcaacct gctcctttac ttcgccttct acatcatcat gaagctccgg agtggggaga1200
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tcttcttctt cttccaggga ctcagcacct ggcagaaaac ccctgcagag tcgaggagc1320
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cctccatcgc catgttcggg tccttcctgg tgttgctgac actggatgac gacctggata1440
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aggggccctg agctcctttg tgtcatagac cggtcactct gtcgtgctgt ggggatgagt1560
cccagcaccg ctgcccagca ctggatggca gcaggacagc caggtctagc ttaggcttgg1620
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tgaatctctg tctgtatca gggccccagt tctctttggg ctgtccctgg ctgccatcac1980
tgcccattec agtcagccag gatggatggg ggtatgagat tttgggggtt ggccagctgg2040
tgccagactt ttggtgctaa ggctgcaag gggcctgggg cagtgcgtat tctcttccct2100
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atttgcattc aataaacaac cagactcaga taaaaaaaaa 2860

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(2) INFORMATION ON SEQ ID NO. 42:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 2137 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 42:

gtccgctttc	gtctccgtec	tgctgccgtt	accgccgctg	ctgccgccgc	ttgcgtcccc	60
cgctccgggc	tgtgggtgag	ccgggaccca	ggaccatgtc	tctgtctcgc	tcagaggaga	120
tgcaccggct	cacggaaaat	gtctataaga	ccatcatgga	gcagttcaac	cctagcctcc	180
ggaacttcat	cgccatgggg	aagaattacg	agaaggcact	ggcaggtgtg	acgtatgcag	240
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ccaaagaact	cggagacgtt	ctcttccaga	tggctgaagt	ccacaggcag	atccagaatc	360
agctggaaga	aatgctgaag	tcttttcaca	acgagctgct	tacgcagctg	gagcagaagg	420
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agggcagcaa	gaatcctcag	aagtactcgg	acaaggagct	gcagtacatc	gacgccatca	600
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accccattec	ggggggccaag	cccctgccgg	tggcccccca	gctggcaccg	ttcgtggggc	960
ggatgtctgc	ccaggagagc	acacccatca	tgaacggcgt	cacaggcccg	gatggcgagg	1020
actacagccc	gtgggctgac	cgcaaggctg	cccagcccaa	atccctgtct	cctccgcagt	1080
ctcagagcaa	gctcagcgac	tcctactcca	acacactccc	cgtgcgcaag	agcgtgaccc	1140
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ccggcctgga	gcgcaatggc	cgtatgcggg	tgaaggccat	cttctcccac	gctgctgggg	1260
acaacagcac	cctcctgagc	ttcaaggagg	gtgacctcat	taccctgctg	tggtttccct	1320
cccgcgatgg	ctggcactac	ggagagagtg	agaagaccaa	gatgcggggc	tggtttccct	1380
tctcctacac	ccgggtcctg	gacagcgatg	gcagtgacag	gctgcacatg	agcctgcagc	1440
aagggaagag	cagcagcacg	ggcaacctcc	tggacaagga	cgacctggcc	atcccacccc	1500
ccgattacgg	cgccgcctcc	cgggccttcc	ccgccagac	ggccagcggc	ttcaagcaga	1560
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ccctttgccc	acgtccagct	gaagccgaca	gtgaccaacg	acaggctctg	ccccctcctc	1740
agctgatggc	cacatctgca	gtgctgcccc	tctggtggct	tccccgccc	ttcccatgta	1800
gcctgttctg	tcatcatctg	tgcgttccctg	tgtagagaac	atccaggccc	cggctgcctg	1860
gtcttgcccc	acttgagtct	ggcctggact	ggatcccagc	tgttctaggg	agggccgggc	1920
agagtggggc	gcaggccccc	gaagggcgag	acccagtggc	tgggctgccc	agggctgagg	1980
ggccgcctct	tgaggggtaca	cgccctctggt	cacatggcca	tggagccttg	ggtacccctg	2040
agttaagggg	ggacatttgg	ccagctgggtg	gctgggaggg	gagcctgggt	gccctgctgc	2100
ttctcctgcc	taataaacag	gcttctcctg	caaaaaa			2137

(2) INFORMATION ON SEQ ID NO. 43:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 2410 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual
ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 43:

ttgagcagac	acaggtgcag	gcagtgggtga	ctctacaggc	cctgctattc	cgggcccttt	60
tgcaacgttg	tggcaacaat	aaaattttga	cgtagccatc	ctccatttgg	aagtctgggtg	120
gctgggtttgc	cgtggaaatg	accctgtttt	tatttccaga	attacctctg	ggttttagaga	180
agtggttttt	aaacgagtgt	gggtaaaaaa	aattacctga	ggtacttgtc	agagtgcgag	240
acttctaggt	cccaccagc	tctcatcaat	cagtttagtg	agggtgggtgc	ccaggactct	300
gattttaaac	atacccttag	aaagattctg	atacaggtag	agggtgagaag	ccctggttta	360
gaggcagctc	ggcctccctt	catggtggga	ccagggccag	cagggaatgt	cagggccacc	420
cctgaacttc	actgtgactt	ctggcttgca	gagggtggcc	cgaggaggaga	tgggtgggagg	480
agctcaacag	cgggaagggtg	atgtacgcct	tctgcagagt	gaaggacccc	aactctggac	540
tgccccaaatt	tgtcctcatc	aactggacag	gcgagggcgt	gaacgatgtg	cggaaggagg	600
cctgtgccag	ccacgtcagc	accatggcca	gcttcctgaa	gggggcccat	gtgacctatc	660
acgcacgggc	cgaggaggat	gtggagcctg	agtgcacat	ggagaagggtg	gccaaggcctt	720
caggtgccaa	ctacagcttt	cacaaggaga	gtggccgctt	ccaggacgtg	ggacccagg	780
ccccagtggg	ctctgtgtac	cagaagacca	atgccgtgtc	tgagattaaa	agggttggtg	840
aagacagctt	ctgggccaaa	gcagagaagg	aggaggagaa	ccgtcggctg	gaggaagagc	900
ggcggggccga	ggaggcacag	cggcagtggg	gcaggagcgc	cgaggagcgtg	agtgcgtgag	960
gctgcacgcc	gggagcagcg	ctatcaggag	cagggtggcg	aggccagccc	ccaggaggacg	1020
tgggagcagc	agcaagaagt	ggtttcaagg	aaccgaaatg	agcaggagtc	tgccgtgcac	1080
ccgaggggaga	ttttcaagca	gaaggagagg	gccatgtcca	ccacctccat	ctccagtcct	1140
cagcctggca	agctgaggag	ccccttcctg	cagaagcagc	tcacccaacc	agagacccac	1200
tttggcagag	agccagctgc	tgccatctca	aggcccaggg	cagatctccc	tgctgaggag	1260
ccggcgccca	gcactcctcc	atgtctggtg	caggcagaag	aggaggctgt	gtatgaggag	1320
cctccagagc	aggagacctt	ctacgagcag	ccccactgg	tgacgcagca	agggtgctggc	1380
tctgagcaca	ttgaccacca	cattcagggc	caggggctca	gtgggcaagg	gctctgtgcc	1440
cgtgcctgt	acgactacca	ggcagccgac	gacacagaga	tctcctttga	ccccgagaac	1500
ctcatcacgg	gcatcgaggt	gatcgacgaa	ggctgggtggc	gtggctatgg	gccggatggc	1560
cattttggca	tgttccctgc	caactacgtg	gagctcattg	agtgaggctg	agggcacatc	1620
ttgcccttcc	cctctcagac	atggcttcct	tattgctgga	agaggaggcc	tgggagttga	1680
cattcagcac	tcttccagga	ataggacccc	cagtgaggat	gaggcctcag	ggctccctcc	1740
ggcttggcag	actcagcctg	tcaccccaaa	tgcagcaatg	gcctgggtgat	tcccacacat	1800
ccttccctgca	tcccccgacc	ctcccagaca	gcttggctct	tgcccctgac	aggatactga	1860
gccaaagccct	gcctgtggcc	aagccctgag	tggccactgc	caagctgcgg	ggaagggtcc	1920
tgagcagggg	catctgggag	gctctggctg	ccttctgcat	ttatttgcct	tttttctttt	1980
tctcttgctt	ctaaggggtg	gtggccacca	ctgttttagaa	tgacccttgg	gaacagtga	2040
cgtagagaat	tgttttttagc	agagttttgtg	accaaagtca	gagtggatca	tgggtggtttg	2100
gcagcagggg	atgtgtcttg	ttggagcctg	ctctgtgctc	cccactccat	ttctctgtcc	2160
ctctgcctgg	gctatgggaa	gtggggatgc	agatggccaa	gctcccaccc	tgggtattca	2220
aaaacggcag	acacaacatg	ttcctccacg	cggtcactc	gatgcctgca	ggccccagtg	2280
tgtgcctcaa	ctgattctga	cttcaggaaa	agtaacacag	agtggccttg	gcctgttgct	2340
ttcccctatt	ttctgtccca	gctcatccgt	gtctctgaag	aacaaatatg	cttttggacc	2400
aaaaaaaaa						2410

(2) INFORMATION ON SEQ ID NO. 44:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 2333 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 44:

tgaaaaatgc	ggacagtata	ttcagaaagg	ctattccaag	ctcaagatat	ataattgtga	60
actagaaaat	gtagcagaat	ttgagggcct	gacagacttc	tcagatacgt	tcaagttgta	120
ccgaggcaag	tcggatgaaa	atgaagatcc	ttctgtggtt	ggagagttaa	agggctcctt	180
tccgatctac	cctctgccgg	atgaccccag	cgtgccagcc	cctcccagac	agtttcggga	240
attacctgac	agcgtcccac	aggaatgcac	ggttaggatt	tacattgttc	gaggcttaga	300
gctccagccc	caggacaaca	atggcctgtg	tgacccttac	ataaaaataa	cactgggcaa	360
aaaagtcatt	gaagaccgag	atcactacat	tcccaacact	ctcaaccagg	tctttggeag	420
gatgtacgaa	ctgagctgct	acttacctca	agaaaaagac	ctgaaaattt	ctgtctatga	480
ttatgacacc	tttaccgggg	atgaaaaagt	aggagaaaca	attattgatc	tggaaaaccg	540
attcctttcc	cgttttgggt	cccactgcgg	cataccagag	gagtactgtg	tttctggagt	600
caatacctgg	cgagatcaac	tgagaccaac	acagctgctt	caaaatgtcg	ccagattcaa	660
aggcttccca	caaccatcc	tttccgaaga	tgggagtaga	atcagatatg	gaggacgaga	720
ctacagcttg	gatgaatttg	aagccaacaa	aatcctgcac	cagcacctcg	gggcccctga	780
agagcggctt	gctcttcaca	tcctcaggac	tcaggggctg	gtccctgagc	acgtggaaac	840
aaggactttg	cacagcacct	tccagcccaa	catttcccag	ggaaaacttc	agatgtgggt	900
ggatgttttc	cccaagagtt	tggggccacc	aggccctcct	ttcaacatca	caccccgga	960
agccaagaaa	tactacctgc	gtgtgatcat	ctggaacacc	aaggacgtta	tcttgagcga	1020
gaaaagcatc	acaggagagg	aaatgagtga	catctacgtc	aaaggctgga	ttcctggcaa	1080
tgaagaaaac	aaacagaaaa	cagatgtcca	ttacagatct	ttggatgggt	aagggaaattt	1140
taactggcga	tttgttttcc	cgtttgacta	ccttccagcc	gaacaactct	gtatcgttgc	1200
gaaaaaagag	cattttctgga	gtattgacca	aacggaattt	gcaatcccac	ccaggctgat	1260
cattcagata	tgggacaatg	acaagttttc	tctggatgac	tacttgggtt	tcctagaact	1320
tgacttgctg	cacacgatca	ttcctgcaaa	atcaccagag	aaatgcaggt	tggacatgat	1380
tccggacctc	aaagccatga	acccccttaa	agccaagaca	gcctccctct	ttgagcagaa	1440
gtccatgaaa	ggatggtggc	catgctacgc	agagaaagat	ggcgcccgcg	taatggctgg	1500
gaaagtggag	atgacattgg	aaatcctcaa	cgagaaggag	gccgacgaga	ggccagccgg	1560
gaaggggcgg	gacgaaccca	acatgaaccc	caagctggac	ttaccaaatc	gaccagaaac	1620
ctccttcctc	tgggttcacca	acccatgcga	gaccatgaag	ttcatcgtgt	ggcgccgctt	1680
taagtgggtc	atcatcggct	tgctgttcc	gcttatcctg	ctgctcttcg	tggccgtgct	1740
cctctactct	ttgccgaact	atttgtcaat	gaagattgta	aagccaaatg	tgtaaacaaag	1800
gcaaaggctt	cattttcaaga	gtcatccagc	aatgagagaa	tcctgcctct	gtagaccaac	1860
atccagtgtg	attttgtgtc	tgagaccaca	ccccagtagc	aggttacgcc	atgtcaccga	1920
gccccattga	ttcccagagg	gtcttagtcc	tggaaagtca	ggccaacaag	caacgtttgc	1980
atcatgttat	ctcttaagta	ttaaaagttt	tattttctaa	agttttaa	atgtttttca	2040
aaatattttt	caagggtggct	ggttccattt	aaaaatcatc	tttttatatg	tgtcttcggg	2100
tctagacttc	agctttttgga	aattgctaaa	tagaattcaa	aaatctctgc	atcctgaggt	2160
gatataacttc	atatttgtaa	tcaactgaaa	gagctgtgca	ttataaaatc	agttagaata	2220
gttagaacia	ttcttattta	tgcccacaac	cattgctata	ttttgtatgg	atgtcataaa	2280
agtctattta	acctctgtaa	tgaaactaaa	taaaaatggt	tcacctttaa	aac	2333

(2) INFORMATION ON SEQ ID NO. 45:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1612 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 45:

```

gtcttctttt ttttcttttt tttttttttt tttttttttt cctgtggaag tgcttttatt 60
agcagtaagg ctgatcgtaac aaaaaattct cagagcttca taggacaagg tagtacaagt 120
atggatgata caggactgag gaacggggga cggctcaaaa gaaatcaaca tcgtctgggg 180
catccagggtc ccgatatttc acaatggccc ttgggtctcc acgaaccatc ctggtgagag 240
gtttcccagg ataacctccc tggcctcgga aggcatacata gttccctoga ccagcaccat 300
acggggcatg ggggtatgga gggcctcctg tggggactgc agggcggaac gcaccagctc 360
catagcccaa gatcgggggc cggggctgac catagggcat caggccctgg ggagtctggg 420
gtgggtaggg gagtcctggg gtcaaacctg gggggagtat ctgggaggga ccagggtggg 480
gggctggctt gatctcaggc agagctgggc gcttagcatc agtgagggaag ttgttaaaaa 540
acgcgacttc ctttttcaact tcttcaattt tctctgcatg cttgttgaag atatgtttgc 600
gcacaaactc aggacccttg aatttcttgc cactgagagg acacagccac ttatccttgc 660
ccagttcctg cgtgttgagg gtgacgaact tctccacttc ctgctctggg tctttgcgcc 720
ccatcttctg ggcctcttcc tctgagagtg actccgcac actcagcaac ggcgtgagct 780
tctcctcaaa agtcttctgc cactccagca cttcccctg actgatgcgg ttgggtggca 840
tgggcccccg aacgtggatg atcccacagc gattgggcat ctgctcctcg ttgggtgact 900
cacagggtgt gtaataatcc aaggaatgca cgatgcgcag gtaaaggagg agcttgtcca 960
agaccttaat caacttctca tcccgtctca cgttgatctc tgccgggttc ctttcttagl 1020
gaggctcctc aggaggagcg ccccgtctgc tcccagcag ctctcctcc tcggcgcttal 1080
cttctcctcg caggtagtcg gtgatattct tcaagatcgg gttttgcgag ggcaggctcg 1140
tgggcagggg aggcgtccct gggtctgagg ccaaagctg tgcctgtgca tccagcgtgt 1200
ggatcagctt ggccgccagc ttgatgtcgt tgcgcacaat ctgcttgtgc tgggtgatgc 1260
cgttgatgtt gcgaacgcgc cgggtcagggt ccctgttcac accagggtc agctcacact 1320
ccgggagacg gatgttctgc aggttccaac agatctcttt aatgttaaca ctgcggctgal 1380
aggtcaccca gccacgacgg aaaaacctcc tctctggctg gggctctgag agcgccaccc 1440
gcataaagcc tgggtacctt ttacaaaggg agatgatctc ggcccgagg atgttgggcg 1500
cgatgttgcg catgaagagg gagcagggtc tatgcagcgg ccgcggttg cactccagcc 1560
ccgcggcgct cttgggcttc tccattctt cttccttggg cttctccttc tc 1612

```

(2) INFORMATION ON SEQ ID NO. 46:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1106 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 46:

```

gaaagctctg gctttcaggc tataggaaga gcagaagatg atgccagaag ttgctggggtt 60
aaaaccagcg agtccaccg tccttaccag ctcttcagaa ggcggagacc gaccctgata 120
acttacogga tatttcgtca cagaagacac aaagacacat ccagcgggga ccacctcacc 180
tgcagattag acccccaagc caaagacctg aaggatggga cccaggagga ggccacaaaa 240
aggcaagaag cccctgtgga tccccgcccga gaaggagatc cgcagaggac agtcatcagc 300
tggaggggag cgggtgatcga gcctgagcag ggcaccgagc tcccttcaag aagagcagaa 360
gtgcccacca agcctcccct gccaccggcc aggacacagg gcacaccagt gcatctgaac 420
tatcgccaga agggcggtgat tgacgtcttc ctgcatgcat ggaaaggata ccgcaagttt 480
gcatggggcc atgacgagct gaagcctgtg tccaggtcct tcagtgagtg gtttggcctc 540
ggtctcacac tgatcgacgc gctggacacc atgtggatct tgggtctgag gaaagaattt 600
gaggaagcca ggaagtgggt gtcgaagaag ttacactttg aaaaggacgt ggacgtcaac 660
ctgtttgaga gcacgatccg catcctgggg gggctcctga gtgcctacca cctgtctggg 720
gacagcctct tcctgaggaa agctgaggat tttggaaatc ggctaatagcc tgccttcaga 780
acaccatcca agattcctta ctcgatgtg aacatcggtc ctggagttgc ccaccgcca 840
cgggtggacct ccgacagcac tgtggccgag gtgaccagca ttcagctgga gttccgggag 900
ctctcccgtc tcacagggga taagaagttt caggaggcag tggagaaggt gacacagcac 960
atccacggcc tgtctgggaa gaaggatggg ctggtgcccc tgttcatcaa taccacaggt 1020
gggcctgttt caccacactg gggcgtatct caggtggggg cgccaggggc cgacagctta 1080
ttattgagtt acctgtttga aaggca

```

(2) INFORMATION ON SEQ ID NO. 47:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1370 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 47:

```

gcggtggcga ggggcgtaac ggttgttcta gtccggcccc ctctggctg gtccagccac 60
attaaccggc aggatgtcgg aggtgcggct gccaccgcta cgcgccctgg acgactttgt 120
tctggggctg gcgcgtctgg cggctccgga tccatgcgac ccgcagcgat ggtgccaccg 180
cgtcatcaac aacctctctt actaccaaac caactacctt ctctgcttcg gcatcggcct 240
cgctctcgcc gggtagctgc ggccacttca tacgctcttg agcgcgctgg tagtggcggt 300
ggccctcgcc gtgctggtgt gggcagctga gaccgcgcca ctgtgcgccg ctgccgccgc 360
agccaccctg cagcctgcct ggccgcagtg cttgccgtcg gcctcctggt gctctgggtc 420
gcgggcggcg cttgcacctt cctgttcagc atcgccgggc cgggtgcttct gatcctggtg 480
cacgcctcgt tgcgcctgcg caaccttaag aacaagattg agaacaagat cgagagcatt 540
ggtctcaagc ggacgccaat gggcctgcta ctagaggcac tgggacaaga gcaggaggct 600
ggatcctagg cccctgggat ctgtaccag gacctggaga ataccacccc acccccagcc 660
cataattggg acccagagcc ctttcccagc acttaaaaca ggagcctaga gccccctgcc 720
caaacaaaac aggacatctg tgaccgccct acccccacgc cagccccaaa ctaagatatc 780
cctcacaccc agccccatt acctagggac aagagtcttc cccagccttg aacctaggac 840
caagagccac ctacatccag ccccaaaaact ggggcttcag gccagagcat ccatggccaa 900
tttcaaattg tgaaccaga gacactccca tccacccttc tccatgctca tccccaaaact 960
ggggcctgga gcaaggcact ctcaaactct gaaccctgga ccaaagcttt tccagaccccc 1020
accctacctt ccaaccagc tcaagacatt gccaaactct gaactcagaa cccaagtgtt 1080
ccatgcccc tgttggtatg agtcgggtat cctgactgtt ggacccctgg tccaggtgat 1140
cccgaccctc accagtccca tttgcctccc tccagctctg cttaggcatt ttgcccctca 1200
ccccaatgtt ccacaccatc gacaaccaag gggtaggtg gggacaggcc tcagcaggga 1260
atggggcgta tatgttagtg ttgctgcaac aataaagcct gttgcatctc tcatgccaaa 1320
aaaaaaaaa aagtcgaccg gccgcaaata tagtagtagt agtcgtccgc 1370

```

(2) INFORMATION ON SEQ ID NO. 48:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 617 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 48:

```
ctcgtagttt attaaatgat gtacaatttg gccagtttgg agatgacca aaggaggaag 60
taatggttct ggagagaatc ttactggcag accatcaagg ttgatttaca ggtagaacat120
ccataccagt tcctactaaa atatgcaaag caactcaaag gtgataaaaa caaaattcaal80
aagttggttc aaatggcatg gacatttgta aatgacagtc tctgcaccac cttgtcactg240
cagtgggaac cagagatcat agcagtagca gtgatgtatc tcgcaggacg tttgtgcaaa300
tttgaaatac aagaatggac ctccaaaccc atgtatagga gatgggtgga gcagtttggt360
caagatgtcc cggtcgacgt tttggaagac atctgccacc aaatcctgga tctttactca420
caaggaaaac aacagatgcc tcatcacacc ccccatcagc tgcaacagcc cccatctcct480
gagcctccca ccccgctgcc tgggccctgt ggttgctggg cctcccacct caaggagggg540
aaggttgtac agcccgaacc cgtggagcaa tgccctgtct ggcctccaaa accaaaataa600
aactgggtca ctttaaa 617
```

(2) INFORMATION ON SEQ ID NO. 49:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1899 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

(A) ORGANISM: HUMAN

(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 49:

tgtgtgagggc	ccaacagcgg	aatcatcgat	gcaggggcct	gaattaatgt	atctgtgatg	60
ttacagcctt	tcgattatga	tccaatgag	aaaagtaaac	acaggttatg	gttcagtcta	120
tgtttgctcc	aactgacact	tcagatatgg	aagcagtatg	gaaggaggca	aaaccggaag	180
accttatgga	ttcaaaactt	agatgtgtgt	ttgaattgcc	agcagagaat	gataaaccac	240
atgatgtaga	aataaataaa	attatatcca	caactgcac	aaagacagaa	acaccaatag	300
tgtctaagtc	tctgagttct	tctttggatg	acaccgaagt	taagaagggt	atggaagaat	360
gtaagaggct	gcaaggtgaa	gttcagaggc	tacgggagga	gaacaagcag	ttcaagggaag	420
aagatggact	gcggatgagg	aagacagtgc	agagcaacag	ccccatttca	gcattagccc	480
caactgggaa	ggaagaaggc	cttagcaccc	ggctcttgge	tctgggtgggt	ttgttcttta	540
tcgttgggtg	aattattggg	aagattgcct	tgtagaggta	gcatgcacag	gatggtaaat	600
tggattgggtg	gatccaccat	atcatgggat	ttaaatttat	cataaccatg	tgtaaaaaga	660
aattaatgta	tgatgacatc	tcacaggtct	tgcctttaa	ttaccctctc	ctgcacacac	720
atacacagat	acacacacac	aaatataatg	taacgatctt	ttagaaagtt	aaaaatgtat	780
agtaactgat	tgagggggaa	agaatgatc	tttattaatg	acaagggaaa	ccatgagtaa	840
tgccacaatg	gcatattgta	aatgtcattt	taaacattgg	taggccttgg	tacatgatgc	900
tggattacct	ctcttaaaat	gacacccttc	ctcgctgtgt	ggtgctggcc	cttggggagc	960
tggagcccag	catgctgggg	agtgcggtca	gctccacaca	gtagtcccca	cgtggcccac	1020
tcccggccca	ggctgctttc	cgtgtcttca	gttctgtcca	agccatcagc	tccttgggac	1080
tgatgaacag	agtcagaagc	ccaaagggaat	tgcactgtgg	cagcatcaga	cgtactcgct	1140
ataagtgaga	ggcgtgtgtt	gactgattga	cccagcgctt	tggaaataaa	tggcagtgtc	1200
ttgttcactt	aaagggacca	agctaaattt	gtattgggtc	atgtagtga	gtcaaaactgt	1260
tattcagaga	tgtttaatgc	atatttaact	tattttaatgt	atttcatctc	atgttttctt	1320
attgtcacaa	gagtacagtt	aatgctgcgt	gctgctgaac	tctgttgggt	gaactgggtat	1380
tgctgctgga	gggctgtggg	ctcctctgtc	tctggagagt	ctgggtcatgt	ggaggtgggg	1440
tttattggga	tgctggagaa	gagctgccag	gaagtgtttt	ttctgggtca	gtaaataaca	1500
actgtcatag	ggagggaaat	tctcagtagt	gacagtcaac	tctaggttac	cttttttaata	1560
gaagagtagt	cagtcttcta	gattgttctt	ataccacctc	tcaaccatta	ctcacacttc	1620
cagcgcccag	gtccaagtct	gagcctgacc	tccccttggg	gacctagcct	ggagtcaggga	1680
caaatggatc	gggctgcaga	gggttagaag	cgagggcacc	agcagttgtg	gggtggggagc	1740
aagggaagag	agaaactctt	cagcgaatcc	ttctagtact	agttgagagt	ttgactgtga	1800
attaatttta	tgccataaaa	gaccaaccca	gttctgtttg	actatgtagc	atcttgaaaa	1860
gaaaaattat	aataaagccc	caaaattaag	aaataaaaa			1899

(2) INFORMATION ON SEQ ID NO. 50:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1398 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 50:

```

agaatgtcgg gcggtgctgc gaggeccaag cccggggccgg ggccgcctcc ctcaacgcct 60
cccttgacgg cctccacaac gcactcttcg ccactcagcg cagcttggag cagcaccagc 120
ggctcttcca cagcctcttt gggaacttcc aagggtcat ggaagccaac gtcagcctgg 180
acctggggaa gctgcagacc atgctgagca ggaaagggaa gaagcagcag aaagacctgg 240
aagctccccg gaagagggac aagaaggaag cggagccttt ggtggacata cgggtcacag 300
ggcctgtgcc aggtgccttg ggcggggcgc tctgggaggc aggatccccct gtggccttct 360
atgccagctt ttcagaaggg acggctgccc tgcagacagt gaagttcaac accacataca 420
tcaacattgg cagcagctac ttccctgaac atggctactt ccgagcccct gagcgtggtg 480
tctacctgtt tgcagtgagc gttgaatttg gccagggcc aggcaccggg cagctggtgt 540
ttggagggtc ccatcggact ccagtctgta ccactgggca ggggagtggg agcacagcaa 600
cggctcttgc catggctgag ctgcagaagg gtgagcgagt atggtttgag ttaaccagg 660
gatcaataac aaagagaagc ctgtcgggca ctgcatttgg gggcttcctg atgtttaaga 720
cctgaacccc agccccaatc tgatcagaca tcatggactc gccagctct cctcggcctg 780
gggctctggc caaggatggg ctggagggtc ttcagttggt ctgtctcttc cctggaaacc 840
ttctgcaaag atggtgtggt gtacgtggct tccctgtaac cacatggggc ttggccattt 900
ctccatgatg agaaggactg gaatgttctt ccgggcagga catggtccta ggaagcctga 960
accttggctt ggcattgcctt ctccagacagc acggcctggg ctccaactct tcaccacacc 1020
ctgtattcta caacttcttt ggtgttttgc tctcctgtg gttggaaact tctgtacaac 1080
actttaaaact tttctcttgc ttctcttctt cttctccctt atcgtatgat agaaagacat 1140
tcttccccag gaggaatgtt taaaatggag gcaacatttt ggccaacatt ggaaagcact 1200
agagggcaat gggattaaac caacctgctt ggtctctatt agtcagtaat gaagacgaca 1260
gcctggccaa ccaagggaaa ggaaattagt atcttttagt tcagtcattc cttgtagggg 1320
tatgggtttt agcttgtggc cccaccgaa aagattcatc ttggattgtt aatgcctatt 1380
attccccaca ttaaggggg

```

(2) INFORMATION ON SEQ ID NO. 51:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1340 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 51:

```

tttggcatca tttacaattt catagaatta ctgtgaaggc ctttctagtt gagatggttg 60
ggtatttggtg attctaattg ttaaccccag aagaaggtaa tttagcttgt atttatttaa 120
aaccatttta gccttttact tatactctggt agaattccag tgatcatcct aataagggtat 180
atttcagaat aatttttttt tccttcagaa taacttagaa tcagatgcta taagggtctcc 240
taggagcagt gtgaaatttc cgtaaagata aatttgaatg ttgtaaccaa gtttatatta 300
aaccaagagg ccatttccaa tatgattttt tgtttctttt taacttgta agtccttaag 360
agattacatg ctagggttg agtcatttct attgtagata atgatggccc acacagtcac 420
cttcaactat ccacataagc taggctttcc gcttttgcca cggacagtgt gaccaagata 480
tttccagagt aaataaccca ccacaacctt ggtaattcct cttttcttct taagctccag 540
gaagcgaaag cagaaggact cttttcagac tgccctctgt agcctacatt gcagctttcc 600
aaaacaggca gctagcactg ggaaagccca tgtggtgacc ccatattttt ctgaggttct 660
tcttttccat ggtgttactt tattatcaga aagtaaattc agaaaacagg tcttgccctt 720
agcagacaag aaccacacca gtttcttgta aaggtaacgg atacattggg attcaggagt 780
gacacagagg tccagcccca gaacttgtaa ggattttgtt tgaacactga gcagatgcct 840
cctccctgcc acccatcaca ctagttaggg ctggccatga attctatgcc agagtcactc 900
ctgcagtctg ctagggatgg gccttcttat cccactctcg cacacatccc agtctagtct 960
ttgccttcac agagtcctcc ttgacacccc tgacttaatg atagttgctg ttttgagtal1020
gaattgatca ggtttaagtc atcctgctca ggttgggcat agtggctcat gcctgtaatc1080
tcagcacttt gggaagccaa agtgggagga ttgcttgagc ccaggagtgc caaacatcc1140
tgggcaacag agggagaccc tgtctctacc aagaaaaaaa aaaaaaaaaa aaagttaaaa1200
aaacaattag ctggacctgg tgggtgcacac tcagtaggct gaggtgaaag gattcctttal1260
acatgggaga ctgaagatgc agtgagccat gaatcagcaa ctgcacacca gtatgagagal1320
aaaagtggaa ccctatcaca

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1340

(2) INFORMATION ON SEQ ID NO. 52:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 315 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual
ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 52:

```

atcagcacat caattgcagc attgtggcta ccaggggggtc aggatgcggg cgggtggagcc 60
ctctggcctt tgtgtggtag ccgaggactc tgtgtcagcg accgttttcc gggaaacttc120
cgggcgagac tcacatcttg gaaattcaaa tactcaatag ctctcgaatt ctaggaatct180
tgagaagagg cctggattaa ggattcagac gtgggccctc agatggctat ggcattgctg240
gttctaccaa cgtgacaggt gatcaagtta agaagctgga cgtcctctcc aacgacctgg300
gtatggaaca ggta                                     315

```

(2) INFORMATION ON SEQ ID NO. 53:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1162 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual
ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 53:

```

cggctcgagc ggctcgagat tcgaggctcgt ggtggtcttg gaagagcgtc gagggggccg 60
tggaactgga atgggccgag gagatggatt tgattctcgt ggcaaactg aatttgatag 120
gcatagtgga agtgatagat ctggcctgaa gcacgaggac aaacgtggag gtagcggatc 180
tcacaactgg ggaactgtca aagacgaatt aacagagtcc cccaaataca ttcagaaaca 240
aatatcttat aattacagtg acttggatca atcaaagtgt actgaggaaa cacctgaagg 300
tgaagaacat catccagtgg cagacactga aaataaggag aatgaagttg aagaggtaaa 360
agaggagggt ccaaaagaga tgactttgga tgagtggaag gctattcaaa ataaggaccg 420
ggcaaaagta gaatttaata tccgaaaacc aaatgaaggt gctgatgggc agtggaaaga 480
gggatttggt cttcataaat caaagagtga agaggctcat gctgaagatt cggttatgga 540
ccatcatttc cggaagccag caaatgatat aacgtctcag ctggagatca attttgga 600
ccttgccgc ccaggacgtg gcggcagggg aggacgaggt ggacgtgggc gtggtgggcg 660
cccaaaccgt ggcagcagga ccgacaagtc aagtgtctct gctcctgatg tggatgacc 720
agaggcattc ccagctctgg cttaactgga tgccataaga caaccctggt tcctttgtga 780
acccttctgt tcaaagcttt tgcattgcta aggattccaa acgactaaga aattaaaaaa 840
aaaaagactg tcattcatac cattcacacc taaagactga attttatctg ttttaaaaaa 900
gaacttctcc cgctacacag aagtaacaaa tatggtagtc agttttgtat ttagaaatgt 960
attggtagca gggatgtttt cataattttc agagattatg cattcttcat gaatactttt 1020
gtattgctgc ttgcaaatat gcatttccaa acttgaaata taggtgtgaa cagtgtgtac 1080
cagttaaaaa aatcacaaaa aaaaaaaatt ttaattaagg atttagaagt tcccccaatt 1140
acaaactggt tttaaatatt gg
1162

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(2) INFORMATION ON SEQ ID NO. 54:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1826 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 54:

```

cggtcgagg cccccgccct gttcgccccg cggcaccggc ccgcgccccg ccatggagga 60
cctggatgcc ctgctctctg acctggagac taccacctcg cacatgccaa ggtcaggggc 120
tcccaaagag cgccctgcgg agcctctcac ccctcccca tcctatggcc accagccaca 180
gacaggggtct ggggagtctt caggagcctc gggggacaag gaccacctgt acagcacggt 240
atgcaagcct cggcccccaa agcctgcagc cccggcgggc cctccattct cctcttccag 300
cgggtgtcttg ggtaccgggc tctgtgagct agatcggttg cttcaggaac ttaatgccac 360
tcagttcaac atcacagatg aaatcatgtc tcagttccca tctagcaagg tggcttcagg 420
agagcagaag gaggaccagt ctgaagataa gaaaagacc agcctccctt ccagcccgtc 480
tcttggcctc ccaaaggctt ctgccacctc agccactctg gagctggata gactgatggc 540
ctcactctct gacttccgcg ttcaaaacca tcttccagcc tctgggcca ctcagccacc 600
ggtggtgagc tccacaaatg agggctcccc atccccacca gagccgactg gcaagggcag 660
cctagacacc atgctggggc tgctgcagtc cgacctcagc cgccgggggtg ttccaccca 720
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cagcagcttc ttcgagaagg atggagcccc cttctgcccc gagtgtctact ttgagcgctt 900
ctcgccaaga tgtggcttct gcaaccagcc catccgacac aagatggtga ccgccttggg 960
cactcactgg caccagagc atttctgtc cgtcagttgc ggggagccct tcggagatga 1020
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ccgcgctgc cagggctgcc agggcccat cctggataac tacatctcgg cgctcagcgc 1140
gctctggcac ccggactgtt tcgtctgcag ggaatgcttc gcgcccttct cgggaggcag 1200
ctttttcgag cagcagggcc gccggttggt cgagaaccac ttccacgcac gacgcggctc 1260
gctgtgcgcc acgtgtggcc tccctgtgac cggcgcgtgc gtgtcgcccc tgggtcgccg 1320
cttccacccg gaccacttca catgcacctt ctgcctgcgc ccgctcacca aggggtcctt 1380
ccaggagcgc gccggcaagc cctactgcca gccctgcttc ctgaagctct tcggctgaca 1440
gcccgcctcg ctcgccctct ccccgaggag ccgcgccttc ccggaagaag cgggtcctcc 1500
agaccccgag gccttgctct cagagcggga ggccccaccc actggagagc cccgccccta 1560
aggtactatg agtcctcagg ggtcaagttc agaaacggcc cagccagacc taaaccacac 1620
cgccacaaaa gtggattgca cacagacaag aactcccgtg cgggcctcca ctctattccc 1680
acccttgagg gagccccctt actgggggag ggtccttgca attccagcga atcgagggcc 1740
aggccaggac gtccttgctc cctgcacct cactgttctg tgcacttttt ctacctacat 1800
aaacacacgc attccacctc aaaaaa

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1826

(i) SEQUENCE CHARACTERISTIC:

- (ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) ANTI-SENSE: NO

(A) ORGANISM: HUMAN
(C) ORGAN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 55:

gatgaagtag	atgactttga	ggacttcac	ttcagccact	tctttggaga	caaagcactg	60
aagaagaggt	cagggaagaa	ggacaagcac	tcacagagcc	caagagctgc	ggggcccagg	120
gaggggcaca	gcataggggg	ctgacaccct	gccccacagg	gaatggcctt	ggcctggccc	180
agcccaagat	cccagcggtt	tctaactcct	ggaggggtga	ctctgtcctg	gcttgtttgg	240
tgtcctcaga	tatctttcac	acagtagagc	aaaatcacca	gccctgcact	gatgtcactt	300
tatgtagaaa	aaggccttag	ctggacctgc	gttgccgtct	atgcaaatgc	atgcaaatac	360
tccaggccct	gggatgtggg	cttgtgtttt	gtcactgtga	agggggagat	gggagaggag	420
cctgttttgg	ggtggggtct	ggggaaggca	atctgattct	gaagctaaag	agctttcacc	480
ctcttgagtg	tatgtcccca	tagtggggcc	cttgaccacg	actgtgaccg	gtgccttggg	540
atttgactag	agttgtctgg	tcgaggccca	gcacgaggac	ttaccctggg	gttttgtag	600
gtttggaagc	agctgtccct	agggggtgaa	gtcccccccc	tttttttttt	tttacccttg	660
cttctcccac	ggcttcacct	ccctatgtga	actgtagact	cagatcccaa	taaagtgtct	720
ttgcagctat	gatgctaggt	ggtttctaag	cacaggggac	acccacacc	ccctgcctga	780
atggatgggt	ccatcccagg	cactgggtact	tgcccccttg	ttctgtatcc	ccctttgccc	840
ttgccttgcc	cttccaacaa	accctaggcc	cttgagaagc	tgataactct	ccttttgctc	900
acagctgcct	tggccccacc	cctgggagat	gtagcaaatt	gagtggtggg	tttgaggtct	960
gagcctcagg	ctcaaatcca	ggccaagtga	tcttgggcaa	gttaatctct	gggaactttg	1020
ggtttcttat	cctcaaaaaa	ggcgatggaa	gggctgggga	agtgattaaa	taaaagcaac	1080
qcaagaaaaa	aaaaaaaaaa	aaaaaaaaaa	aaaa			1114

(2) INFORMATION ON SEQ ID NO. 56:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1644 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 56:

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ctcgagccgt gcaagtggaa taacacgggc tgccaggccc tgcccagcca agaacgaagg 60
ccccagcaag gccttcgtga actgtgacga gaacagccgg cttgtctccc tgaccctgaa 120
cctggtgacc agggctgatg agggctggta ctggtgtgga gtgaagcagg gccacttcta 180
tggagagact gcagccgtct atgtggcagt tgaagagagg aaggcagcgg ggtcccgcga 240
tgtcagccta gcgaaggcag acgctgctcc tgatgagaag gtgctagact ctggttttcg 300
ggagattgag aacaaagcca ttcaggatcc caggcttttt gcagaggaaa aggcggtggc 360
agatacaaga gatcaagccg atgggagcag agcatctgtg gattccggca gctctgagga 420
acaaggtgga agctccagag cgctggtctc caccctgggtg cccctggggc tgggtgctggc 480
agtgggagcc gtggctgtgg ggggtggccag agcccggcac aggaagaacg tcgaccgagt 540
ttcaatcaga agctacagga cagacattag catgtcagac ttcgagaact ccaggggaatt 600
tggagccaat gacaacatgg gagcctcttc gatcactcag gagacatccc tcggaggaaa 660
agaagagttt gttgccacca ctgagagcac cacagagacc aaagaaccca agaaggcaaa 720
aaggtcatcc aaggaggaag ccgagatggc ctacaaagac ttcctgctcc agtccagcac 780
cgtggccgcc gagggcccag acggcccccga ggaagcctag acggtgtcgc cgctgctcc 840
ctgcacccat gacaatcacc ttcagaatca tgtcgatcct ggggccctca gctcctgggg 900
acccactccc ctgctctaac acctgcctag gtttttcccta ctgtcctcag aggcgtgctg 960
gtcccccctc cagtgcacatc aaagcctggc ctaattgttc ctattgggga tgagggtggc 1020
atgaggaggt cccacttgca acttctttct gttgagagaa cctcaggtac ggagaagaat 1080
agaggtcctc atgggtccct tgaaggaaga gggaccaggg tgggagagct gattgcagaal 1140
aggagagacg tgcagcggcc ctctgcaccc ttatcatggg atgtcaacag aatttttccc 1200
tccactccat cctccctccc cgtccttccc ctcttcttct ttccttccat caaaagatgt 1260
atattgaattc atactagaat tcaggtgctt tgctagatgc tgtgacagg atgccaccaa 1320
cactgctcac agcctttctg aggacaccag tgaaagaagc cacagctctt cttggcgtat 1380
ttatactcac tgagtcttaa cttttcacca ggggtgctca cctctgcccc tattgggaga 1440
ggtcataaaa tgtctcgagt cctaaggcct tatgggtcat gtatgatgag catacacaca 1500
ggtaattata aaccacacatt cttaccattt cacacataag aaaattgagg tttggaagag 1560
tgaagcgttt ttctttttct tttttttttt tgagacggag gtcttcactg tcgcccaggc 1620
tggagtgcag tggcgcaatc tcgg                                     1644

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(2) INFORMATION ON SEQ ID NO. 57:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 2184 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual
ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 57:

tgcagtggc	agagtgcct	ggtataagg	agagggcatc	accttgcccc	ctgtgctgac	60
tcctgccc	gtgcgaggg	agtccatccc	gatccggctc	ttcctggccg	ggtatgagct	120
cacgcccacc	atgcgggaca	tcaacaagaa	gttctctgtg	cgctattacc	tcaacctggt	180
gctgatatag	gaggaggagc	ggcgctactt	caagcagcag	gaagtgggtg	tgtggcgga	240
gggtgacatc	gtacggaaga	gcatgtccca	ccaggcggcc	atcgccctac	agcgctttga	300
gggcaccacc	tccttgggtg	aggtgcgga	ccccagccag	ctgtctgaca	acaactgcag	360
gcagtagggc	cccagggccg	agaagatgct	gggcacccac	ccagcacccc	catctaccaa	420
caccagcggc	tgggggagg	ggcggaacct	gtgaggtctc	gttgaccctg	tacttgcaac	480
ctgaaaacaa	atcatgtttt	tgacttaaat	tcttttctct	ggagaaccca	aggggcttgg	540
ggtgggaagc	agtctctcct	tgggattctg	cggccgatgt	gggatagaag	aggtagcatc	600
ctggaagcca	gcctctctgg	ggaacatgag	cccccttcct	cggggggctg	ccttgccgtct	660
tagaggagg	agagcagaga	gcacgcaccc	ttggctcctg	gctctctgag	cttcctgata	720
caggatctga	gcatgtccct	gggattctga	gctgccaaca	gggccctggg	tagtcacatc	780
ttgtactccc	ctttgctgtc	ccggaggtag	tggcaggagt	tgggccagcc	cccactaagt	840
ggcaggggaa	gactcacgat	tgggaagcta	cctctttggg	aatcttggat	gtggtgatct	900
caagttccca	caggccacct	ccttctggcc	actcactgct	gggaccag	cacctccctt	960
ctccatcctc	tctggattgt	cagtaatgtc	ctggaacaga	agcctgtagg	atggccttgg	1020
gcacggagaa	gccctgggg	cagtgtcgtg	cacggatggc	ggcagtgttg	aaccagag	1080
gctgaacccg	gcccaccacg	gaagatgagt	gcatggcaac	cgccctgcct	cacgtcgctc	1140
cacttggttaa	ccccaaggct	tgggctgttc	taggtattgc	ttcacgtgcc	ccagcaagcc	1200
cttaacaaga	gggcctgggt	ccctgaagaa	ccaatcccag	gaaggggcct	tgatccctcc	1260
gccttgctga	gagtgaacct	tcgtctctcc	tcaccctcca	tttcatttct	gggaattggg	1320
gcttagtttc	gaacctttgg	caaggctggt	cttactaatg	cccaagcccc	tttaccctcc	1380
tccttatagg	ttacacagg	gagaccagg	cctcggcaga	agactgctgc	cacacttccg	1440
aatcattctg	cttgccaaat	aggtcatctt	caccagttag	ctgacccaag	tttaggacca	1500
ttggtatcgt	gtgtttaaaa	aacacatata	aaaaaactct	tgtgaatatt	cttggttatgc	1560
tagagaggaa	ggtacttctc	cctctacggc	tctgcgctgg	ggcctatgg	agtaaagttg	1620
tttactgtcc	tttttctgct	tcccctggaa	atgacaggca	ttactctccc	attggcctcc	1680
cttcccttta	tagaaagacc	aagcaggccc	cactggccaa	gaggtacggt	atttggcagt	1740
ctgagttctc	agtaatttgg	aaagttaagg	agttggttcc	tgtgtcacct	ttcagttagt	1800
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tcattggatca	gagctgagac	tggagggaga	ggcatttcgg	gtagcctagg	agggcgactg	1920
gcggcagcag	aaccgaggaa	ggcaagggtg	tttcccccac	gctgtgtcct	gtgttcagg	1980
gcgacacaca	atcctcatgg	gaacaggatc	acccatgcgc	tgcccttgat	gatcaagggt	2040
ggggcttaag	tggataagg	aggcaagttc	tgggttcctt	gccttttcag	agcatgaggt	2100
caggctctgt	atccctcctt	ttcctagctg	atattctaac	tagaagcatt	tgtcaagttc	2160
cctgtgtggc	ccttcccccc	agag				2184

(2) INFORMATION ON SEQ ID NO. 58:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1510 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 58:

```

agcctgggaa acacagtagg gctccacctc tacaaaaaac acaaaaatta gccaggcatg 60
tggcgtcata gtagaattaa tcaaaagcaa gaaaatggct ggaggagctg tcttgttggc 120
aggacctcct ggaactggca agacagctct ggctctggct attgctcagg agctgggtag 180
taagggtcccc ttctgccccaa tgggtggggag tgaagtttac tcaactgaga tcaagaagac 240
agaggtgctg atggagaact tccgcagggc cattgggctg cgaataaagg agaccaagga 300
agtttatgaa ggtgaagtca cagagctaac tccgtgtgag acagagaatc ccatgggagg 360
atatggcaaa accattagcc atgtgatcat aggactcaaa acagccaaag gaaccaaaaca 420
gttgaaactg gacccagca tttttgaaag tttgcagaaa gagcgagtag aagctggaga 480
tgtgatttac attgaagcca acagtggggc cgtgaagagg cagggcaggt gtgataccta 540
tgccacagaa ttcgaccttg aagctgaaga gtatgtcccc ttgccaaaag gggatgtgca 600
caaaaagaaa gaaatcatcc aagatgtgac cttgcatgac ttggatgtgg ctaatgcgcg 660
gccccagggg ggacaagata tctgtccat gatgggccag ctaatgaagc caaagaagac 720
agaaatcaca gacaaacttc gaggggagat taataagggt gtgaacaagt acatcgacca 780
gggcattgct gagctgggtc cgggtgtgct gtttgttgat gaggtccaca tgctggacat 840
tgagtgtctc acctacctgc accgcgccct ggagtcttct atcgctccca tcgtcatctt 900
tgcattccaa cgaggcaact gtgtcatcag aggcactgag gacatcacat cccctcacgg 960
catccctctt gaccttctgg accgagtgat gataatccgg accatgctgt atactccaca 1020
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ggcactgaac cacctggggg agattggcac caagaccaca ctgaggtact cagtgcagct 1140
gctgaccccg gccaaacttg ttgctaaaaa caacgggaag gacagcattg agaaagagca 1200
tgtcgaagag atcagtgaac ttttctatga tgccaagtcc tccgccaaaa tcttgggctt 1260
gaccaggcag ggataagtta cattgaagtt gagatggctt gagggttttt cagcagctaa 1320
gagacttccc caggtgtgcc tggcctgggg tccagcctgt gggcgctttg ccttgggggt 1380
tgggggctgc ccttccccat tcaggcgttg ggttgcagcg ttgttcaatt tcagttgttg 1440
gaaagcgttt tttttttgaa gttagtctta agtgtttccc cttggggtttg ttttgaaaag 1500
aacccttctc
1510

```

(2) INFORMATION ON SEQ ID NO. 59:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1188 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 59:

```

gagaactcac accatatgtg tcctgttcca gtgcgcgggt ctgtggagag ccgggtgcga 60
gcggcggcag cacgagggga aaagagctga gcggagacca aagtcagccg ggagacagtg 120
ggtctgtgag agaccgaata gaggggctgg ggccacgagc gccattgaca agcaatgggg 180
aagaaacaga aaaacaagag cgaagacagc accaaggatg acattgatct tgatgccttg 240
gctgcagaaa tagaaggagc tgggtgctgcc aaagaacagg agcctcaaaa gtcaaaaggg 300
aaaaagaaaa aagagaaaaa aaagcaggac tttgatgaag atgatatcct gaaagaactg 360
gaagaattgt ctttggaagc tcaaggcatc aaagctgaca gagaaaactgt tgcagtgaag 420
ccaacagaaa acaatgaaga ggaattcacc tcaaaagata aaaaaagaa aggacagaag 480
ggcaaaaaaac agagttttga tgataatgat agcgaagaat tggaagataa agattcaaaa 540
tcaaaaaaga ctgcaaaacc gaaagtggaa atgtactctg ggagttaac aaacttccta 600
aaaaagctaa agggaaaagc caaaaatcaa ataagaagtg ggatgggtca gaggaggatg 660
aggataacag taaaaaaatt aaagagcggt caagaataaa ttcttctggt gaaagtgggt 720
atgaatcaga tgaatttttg caatctagaa aaggacagaa aaaaaatcag aaaaacaagc 780
caggctcctaa catagaaagt gggaatgaag atgatgacgc ctcttcaaa attaagacag 840
tggcccaaaa gaagcgagaa aagaaggagc gcgagagaaa aaagcgagat gaagaaaaag 900
cgaaactgag gaagctgaaa gaaaaagaag agttagaaac aggtaaaaag gatcagagta 960
aacaaaagga atctcaaagg aaatttgaag aagaaaactgt aaaatccaaa gtgactgttg 1020
atactggagt aattcctgcc tctgaagaga aagcagagac tcccacagct gcagaagatg 1080
acaatgaagg agacaaaaag aacgaaagat aagaagaaaa agaaaggagg acaagggagg 1140
aaaagagaac agagaaggaa agaagggcct ggcaaaagcc actgtttc 1188

```


(2) INFORMATION ON SEQ ID NO. 60:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 2208 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual
ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 60:

gcaggacggc	tctgggccc	tcctggctga	cttcaacggc	ttctcccacc	tggagctgag	60
aggcctgcac	acctttgcac	gggacctggg	ggagaagatg	gcgctggagg	tcgtgttcct	120
ggcacgaggc	cccagcggcc	tcctgctcta	caacgggcag	aagacggacg	gcaaggggga	180
cttcgtgtcg	ctggcactgc	gggaccgccc	cctggagttc	cgctacgacc	tgggcaaggg	240
ggcagcggtc	atcaggagca	gggagccagt	caccctggga	gcctggacca	gggtctcact	300
ggagcgaaac	ggccgcaagg	gtgccctgcg	tgtgggcgac	ggcccccggtg	tgttggggga	360
gtccccgggt	ccgcaacacc	tcctcaacct	gaaggagccg	ctctacgtag	ggggcgctcc	420
cgacttcagc	aagctggccc	gtgctgctgc	cgtgtcctct	ggcttcgacg	gtgccatcca	480
gctgggtctcc	ctcggaggcc	gccagctgct	gaccccgag	cacgtgctgc	ggcaggtgga	540
cgtcacgtcc	tttgcaagtc	acccctgcac	ccgggacctca	ggccacccct	gcctcaatgg	600
ggcctcctgc	gtcccgaagg	aggctgccta	tgtgtgcctg	tgtcccgggg	gattctcagg	660
accgcaactgc	gagaaggggc	tgggtggagaa	gtcagcgggg	gacgtggata	ccttggcctt	720
tgacggggcg	acctttgtcg	agtacctcaa	cgctgtgacc	gagagcgaga	aggcactgca	780
gagcaaccac	tttgaactga	gcctgcgcac	tgaggccacg	caggggctgg	tgctctggag	840
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actgagctac	aacctgggct	cccagcccgt	ggtgctgctg	tccacccgtg	ccgtcaacac	960
caaccgctgg	ttgcgggtcg	tggcacatag	ggagcagagg	gaagggtccc	tgcaggtggg	1020
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agccctgtgg	cttggggggc	tgccggagct	gcccgtgggc	ccagcactgc	ccaaggccta	1140
cggcacaggc	tttgtgggct	gcttgcggga	tgtggtggtg	ggccggcacc	cgctgcacct	1200
gctggaggac	gccgtcacca	agccagagct	gcggccctgc	cccaccccat	gagctggcac	1260
cagagccccg	cgcccgtgtg	aattattttc	tatttttgta	aacttgctgc	tttttgatat	1320
gattttcttg	cctgagtgtt	ggccggaggg	actgctggcc	cggcctccct	tccgtccagg	1380
cagccgtgct	gcagacagac	ctagtgtgta	gggatggaca	ggcgaggtgg	cagcgtggag	1440
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ccttgcaactg	cgccctgccc	acggtgtccc	cgccgggaag	cagccccggc	tcctgaatca	1560
ccctcgctcc	gtcaggcggg	actcgtgtcc	cagagaggaa	ggggctgctg	aggtctgatg	1620
gggccccttc	tccgggtgac	cccacagggc	ctttccaagc	ccctatttga	gctgctcctt	1680
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agccaccctg	gacatgaccg	tatccctctg	ccacacccca	ggccctgcga	ggggctatcg	1920
agaggagctc	actgtgggat	ggggttgacc	tctgccgcct	gcctgggtat	ctgggcctgg	1980
ccatggctgt	gttcttcatg	tgttgatttt	atttgacccc	tggagtgggtg	ggtctcatct	2040
ttcccatactc	gcctgagagc	ggctgagggc	tgccctcactg	caaaatcctc	cccacaaaag	2100
cggtcagtga	aaagtcgggtc	ctttgtccta	aaaaatgacc	aaggggcca	gcaagttttg	2160
tgaacaaagg	gtgaaggggg	aagttcgaaa	aggttggaag	ggaatttt		2208

(2) INFORMATION ON SEQ ID NO. 61:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 283 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual
ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 61:

```

gaaaagggggg aggggggagtg acaatctttg cttggggcct atgacttctc cagccccaag 60
gggagatgcc accgggaaat cccccaatgt ccactagggg gcaggaggcc accgttcttc120
gtactccgga gaacctggct ggagagctct ttcttggtca cccttcctc cagctgtatc180
tctgccctgc agataacgtg aaggactgga gcaaggctcgt cctggcctat gagcctgtgt240
gggccattgg tactggcaag actgcaacac cccaacaggg aac 283

```

(2) INFORMATION ON SEQ ID NO. 62:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 184 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual
ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 62:

aacggaggat gcctaggctt ctggaggcga agaaggacgc ggcaagctgc gaaaagtcac 60
gggtatctgc aagcatgaaa tgatccgtga atatccgaat ggggcaaccc gtgcagggtga120
agcctgcaca cctgaataaa tcaggggcag acgcagggaa ctgaaacatc ttagtacctg180
cagg 184

(2) INFORMATION ON SEQ ID NO. 63:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1780 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual
ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 63:

```

tcccccccg gggcaacccc cccatcgggc ccccaaagcg ctgggggttac agccttaagc 60
caccaagccc cggccgacct tcttctatct ttccattctc ctttccaaag ccatggccat 120
gcgctcctgt gtacagggtgc ataaacacat cagtgtgcca tccctcacat gcatgtcgtt 180
ccccaccctt ccttcccagg gcttctcttg gctccagcgt tccctctggga ccctctgcag 240
atacagcctg tgctggaccc ccagccaggg tgaggggtca ttctgctctg tcttcccac 300
tgccctcagtt tccccaaaaa gctgctttca cgtccttcta gtagggggcc tcccatgggg 360
gcaaggatcc cttttaggat tcaatctttc ctctttgggc agttttggct ttgagtcctc 420
cagggatcag ggtgagaatg aagaagagct cagtgagcgg aatgacagca gctgggtggg 480
tggtgtgggg agaggctgag gggaaggcag ctctaagact gggagtggag ttcttgagg 540
tgtggggagg ggggcgtggt ttcaatttag aaaaatctca gccagctcga gccagagag 600
aatgcgaaag aggaagttcg gaaggagcga ggaatggggg ggggtggcagc gggggccgct 660
cagttgctgt cgctcttgct caccagcacg gcgtccgact cctcgggtgat ctccagcagc 720
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ctccaccatc tcgggtggct tgagcacttc cacctggccc tcgcggatct tcttgacgtg 840
gaaggtgaag ggtggcacct tgtagaccgc ggtcttgagg cgcgcgtaca ccacgtggtc 900
gggcgtgaag gatttgcca acttgctccg cgacgtcttc agtttctcgc gccgtcggc 960
gggcaccagg cgcgtgcca gcttgctcat gcgttctctc aggggtgtgcc gcgtcttctc 1020
caggttttcc ttggtcttga ggcgcgtctt ctccagggtt tcgcgggtac gcaccttggt 1080
cttctccatc ttctccttgg agaaggcctt cttgaagtgc tccacgcgcc gcaggccctg 1140
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gacgaaagct ccagcgcgcg tcgctcctcc tcgggcgcgt cgccctcgcc cagctcctcg 1260
ccctccttct ctggcagcgc ctccgactct ttcagcgatt tgctgatgct cagtttgcc 1320
ggcagcttca cttcatcctg gtagatcatg actttaagat tgcggcgcgc cagcagctcg 1380
gcctcgttga cctccagctt cttgatctgc cccgcctggc gctccaggct gccgcgcacg 1440
gtcttcacgt tgacgtgac cttgcgcacc ttctccagca gcttgctcac cgtattgctc 1500
gtggtggcgt gcgccttgcc cagcttgctc agctcgcctt ggatgctctg cactgcgcct 1560
tccatctccg cctgccgctc ctccagctgt gcttgagtca gctggatctg gtctacggcc 1620
ccgatgattt tgtccaggag gctcagcacc agcacgcctg tcacctggtc cgacttgatc 1680
agctcttctg agccggcccc cgacggctcc tccgctgctt gagccccagc ggaggaagct 1740
ccggggcctc ggcgatcggg gtaccggggc aagcggcgcg 1780

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(2) INFORMATION ON SEQ ID NO. 64:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1652 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 64:

```

ctcgagcggc tcgagccgat tcggctcgag cggctcgaga agaagatatg ctagtctgta 60
tttttgctgt gctattgagg atcaggacaa tgaactaatt accctggaaa taattcatcg 120
ttatgtggaa ttacttgaca agtatttcgg cagtgtctgt gaactagata tcatctttaa 180
ttttgagaag gcttatttta ttttgatga gtttcttttg ggaggggaag ttcaggaaac 240
atccaagaaa aatgtcctta aagcaattga gcaggctgat ctactgcagg aggaagctga 300
aaccaccagt agtggttctt gaagaaattg gactgcata actctcctcc cttgttgatg 360
acttcttggtg gcatttcaca cactgtagat ggtcactccc ttcattgtcca tgttagctca 420
tggtgtaaga tgatgtcttg tcagtattac tgttttgcta agccgcttca ttcattgccta 480
cacaattttt ttttaaaagg gaactttagt taattaagtg ataagggact taaatatgaa 540
ttagaatggt gcagaaagag ataccttttc tggatatttt aaagttttaa ggtcagtttc 600
tcttaatctg attatgtgca catatgaaaa tggcacatca tatacatgta aaatcaggca 660
gtatacattt attaattact gtatttgaca aaggaaaactc ttaaattata atgtgaaacc 720
tggttttatg aaaccaaaga ctagtgcagc atttcagcat atgtaaaaag aaaaaaaaaa 780
gggaattgac atgtcacata tcaaatgaat ggaaactttg ttgaaacttt aaaaagcaaa 840
tttactccaa agacttgat tggaattac ataccttttt tttttttttt aaaggactac 900
agattatttt taatgactaa attggagtga tacttcttac actaaaaatt atttcttagg 960
cattctgaat ctgggatgag aaacaggatt gtttcacaat agtaagcaca taatttttaa1020
ggccaaggca catttgactc ctgagatgaa ttttttgagg tcataatcaa atacttaggt1080
gtttttgatg ccccaaaata aagtgagaat ggtaatttgc caggaattct tcataacagt1140
atcttacaaa aaacgtgttg ctctcttcac agtattatgt gtaaagtcac tgtttaaagc1200
acgaatgttc cctctggggg acttggttaa gctaaattta ttttgcttcc ctccacttag1260
aagtgtgca cactttacag cagcttcctt tctttccatg gcaactgccta gttaacagaal320
gtcttataaa aatttaaaaa gacacatttc ttacaaaaaa gagttgaatg aggtaaaatg1380
gcattagatg gctctatatt ttttaaagct atgtaattgt tcagcgtcac ttttctaagt1440
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gattaagctt tgttgtgatt gtgaccaaca ttcaggccac gtgagcactg tcttatcaca1560
tcgccaatga gttgtaataa acgttcaacg tacaaaaaaa aaaaaggcg cagcttcctt1620
ggggggaatt actggaagcg ggttaagcg ga
1652

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(2) INFORMATION ON SEQ ID NO. 65:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1085 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

(A) ORGANISM: HUMAN
(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 65:

```

gctccctggc ctccctctca gacagcttgg ggggtgtctgt catggccacc gaccaggact 60
cctactccac cagcagcacg gaggaggagc tggagcagtt cagcagcccc agcgtgaaga 120
agaagccctc catgatcctg ggcaaggctc ggcaccggct gagctttgcc agtttcagca 180
gcatgttcca cgctttcctc tccaacaacc gcaagctgta caagaagggtg gtggagctgg 240
cgcaggacaa gggctcgtac tttggcagcc tgggtgcagga ctacaagggtg tacagcctgg 300
agatgatggc gcgccagacc tccagcacgg agatgctgca ggagattcgc accatgatga 360
cccagctcaa gagctacctg ctgcagagca ccgagctcaa ggccctgggtg gaccccgccc 420
tgcactccga ggaggagctc gaagcaattg tagagtctgc cttgtacaaa tgtgtcctga 480
agcccttgaa ggaagccatc aactcatgcc tgcatacatg ccacagcaag gatgggttcgc 540
tgcagcagct caaggagAAC cagttagtga tcctggccac caccaccact gacctagggtg 600
tgaccaccag cgtgccggag gtgcccatga tggagaagat cctgcagaag ttcaccagca 660
tgcacaaggc ctactcacct gagaagaaga tctccatcct gctcaagacc tgcaaactca 720
tctacgactc catggccctc ggcaaccagc ggaagcccta tggggcggtg gacttcctgc 780
ctgtgctcat gtatgtgctg gccgcagca acctcacgga gatgcttctc aatgtggagt 840
acatgatgga gctcatggac cccgccctgc agctggggga gggttcctac tatctgacca 900
ccacctacgg ggccctggag cacatcaaga gctacgacaa gatcacggtg acccggcagc 960
tgagtgtgga ggtgcaggac tccatccacc gctgggagcg ccggcgctact ctcaacaagg1020
cccgggcctc ccgctcctcc gtacagccac ttcattctgcg tgtcgtacct ggagcccag1080
cagca

```

(2) INFORMATION ON SEQ ID NO. 66:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 1393 base pairs
(B) TYPE: Nucleic acid
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

(A) ORGANISM: HUMAN
(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 66:

```

gggcagggga gggagttgac gggctgacac aggaaactcc cctgaaacct gtttctcagc 60
ttcccggccc agctggggca cccactggaa ggagaggcca ggcggaagac cctgggtccg 120
tcatggcctc tgccctgagg ccaccccgtg tccccaagcc taagggtgtc ctgccttcac 180
actactatga gagctttcta gagaagaagg ggcctgtga ccgggattac aagaagttct 240
gggcaggcct gcagggtctc accatttatt tctacaatag caatcgggac ttccagcacg 300
tgagagaagct caacttgga gcatttgaga aactcacaga tgagattccc tggggaagct 360
cacgtgacct tggcaccac ttcagcctga ttctccgaa tcaggagatc aagttcaagg 420
tagagacctt ggagtgtcgg gaaatgtgga aaggcttcat cttaacggtg gtggagctcc 480
gtgtcccga cgaactgacc ctgcttcctg ggcacctata catgatgtct gaagtcttgg 540
ccaaagagga ggcgcgccgt gcaactggaga caccctcgtg cttcctgaag gtgagccggc 600
tgagagcaca actgctcctg gagcgtacc ccgagtgcgg gaacctgctg ctgcggccca 660
gcggggacgg cgcgcacggt gtcggtcacc acgcggcaga tgcacaacgg gacgcacgtg 720
gtccggcatt acaaggtgaa gcgggagggg cccaagtac gtgatcgatg tggaaacagc 780
gttctcttgc acctccctgg acgcccgtgt caactatttc gtgtcgata ccaaaaaggc 840
gctggtgcca ttctgttag acgaggacta cgagaaggtg ctaggctacg tggaaagcca 900
taaggagaat ggcgagaatg tgtgggtggc gccctccgct ccgggcccag gtcctgcacc 960
ctgcacaggt ggccccaagc cgctgtcacc tgcgtctagc caggacaagc tgccccact 1020
gccccacta ccgaaccagg aagagaacta cgtgaccct attggagatg gccagctgt 1080
tgactatgag aaccaagatg tggcttcctc tagttggcca gtcacctga agccaaagaa 1140
gttgccaaag cctcctgcca agcttccaaa gccaccggt ggaccaagc cagagcccaa 1200
agtctttaat ggtggcttgg gcagggaagc tgccagttca gtttcagccc agcctcttct 1260
ttccccacag gcggggtgg gcagacatgg acggcagagt tacagaagaa gctgggagaa 1320
gaggcggggc actggtagca tggtttcgga cacaccagg accagcgggt tagttccagg 1380
gcgggccagg tgg

```

1393

(2) INFORMATION ON SEQ ID NO. 67:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1248 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 67:

```

ggcacgagga agttaagatc atacatgcgg atgtgctggt aacctgcaag aagcaatcat 60
gctgcgggtcc ggtgtgacct cccaaggcat tcacctggg agtccctggt gctgcacccc 120
aaccagaggca gagctcatcg tgggtgacca gagcggggct atccacatct gggacttgaa 180
aacagaccac aacgagcagc tgatccctga gcccgaggte tccatcacgt ccgcccacat 240
cgatccccgac gccagctaca tggcagctgt caatagcacc ggaaactgct atgtctggaa 300
tctgacgggg ggcatgtgtg acgaggtgac ccagctcacc cccaagacta agatccctgc 360
ccacacgcgc tacgccctgc agtgtcgctt cagccccgac tccacgctcc tcgccacctg 420
ctcggtgat cagacgtgca agatctggag gacgtccaac ttctccctga tgacggagct 480

gagcatcaag agcggcaacc ccggggagtc ctcccgcggc tggatgtggg gctgcgcctt 540
ctcgggggac tcccagtaca tcgtcactgc ttcctcgac aacctggccc ggctctggtg 600
tgtggagact ggagagatca agagagagta tggcgggcac cagaaggctg ttgtctgcct 660
ggccttcaat gacagtgtgc tgggctagcc tgtgacctc cgggactgcc tgggtgcagg 720
ggtggcagct ggagggaccc atgcagcacc caggtcagag cagacctcc cctgccggcc 780
tgcgccactg gacctgatgg cccctgtgg cgccttgacc tgcctggcca ggctgccctg 840
ggactctcag cccccagttg cttatccaga tgtgacagag ctgcaccaa gccaggctgc 900
acactcctgg actgggctag cctgcactgc ctgggaaagt cggccgaggg cccaaagctg 960
ctgaggggtc tgaggctggt gcccaccccc aagctagtgt gttctctgcc cctccctgcc 1020
cgcgtttcag ggctcgggtc catagagaac accaccacca tggccagggt gaagggtttal 1080
ttagtcctg ccagcagctg tcctccctgg tgcaggtggc ctggccagcc cactggattg 1140
gggacgggcc aggtcggggc aggtcggggg ctcatctggt gaggtataa aagcagaccg 1200
acacgcagat gttgctcggt aaaaaaaaaa aaaaaaaaaa aaaaaaaa 1248

```

(2) INFORMATION ON SEQ ID NO. 68:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1099 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 68:

```

ctcgtgcaat ttcgggcagg gagtgtcaag cctgttgtct taacatTTTtg tataaaaaag 60
aacaacagaa attatctgtc atttgagaag tggcttgaca atcatttgag ctttgaaagc 120
agtcactgtg gtgtaatatg aatgctgtcc tagtggtcat agtaccaagg gcacgtgtct 180
ccccttggtg taactgattt ccttttttagt cctctactgc taaataagtt aattttgcat 240
tttgagaaaa gaaacattga ttgctaaaac tttttgctgc tgtgttttg tgttttcatg 300
tttacttggt ttatattgat ctgttttaag tatgagaggc ttatagtgcc ctccattgta 360
aatccatagt catcttttta agcttattgt gttaaagaaa gtagctatgt gttaaacaga 420
ggtgatggca gcccttccct agcacactgg tggaagagac cccttaagaa cctgacccca 480
gtgaatgaag ctgatgcaca gggagcacca aaggaccttc gttaagtgat aattgtcctg 540
gcctctcagc catgaccgtt atgaggaaat atccccatt cgaacttaac agatgcctcc 600
tctccaaaga gaattaaaat cgtagcttgt acagatcaag agaataact gggcagaatg 660
aagtatgttt gtttattttt ctttaaaaaa aaaggatttt ggaactctgg agagtaagaa 720
tatagtatag agtttgctc aacacatgtg agggccaaat aacctgctag ctaggcagta 780
ataaactctg ttacagaaga gaaaaagggc cgggcacagt ggcttattcc tgtaatccca 840
acactgtgga aggccgaggc aggaggatca cttgagtcca ggagtttgaa acctacctag 900
gcaacatggt gaaaccttgt ctctaccaa ataaaaatta gctgggcatg gtggcacgtg 960
cctgtggtcc cagctacttg ggaggctgag gtgggagcct gggaggtcaa ggctgcagtg 1020
agccatgatc atgccactgc actccatcct gggtgacagc aagatcttgt ctcaaaaaaa 1080
aaaaaaaaa aagtcgacc                                     1099

```

(2) INFORMATION ON SEQ ID NO. 69:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 774 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 69:

```

tttatggagc ctgtactatg taccagatgc agactgtgct agcggttggg gatacagtga 60
tgacttggtc tgcctctagg tggcagggag ccattttggg ttttcgaaca gaaaagtgacl20
ataatgaatg ctgagttctt aggaagatta atccaggagt agtctccagg atgtactgga180
aggagagaag ctgaaaccag ggaggctgct gtgtttgcag ttggctgccc agtgctacct240
ctgcagagac aatcaatgtc ctgaaggtag ctggtatgtc tgtgtgact gacacgagcc300
ttcctaccaa gccccagggg ctccatgctg gagaatgcac gtagggctag ggtgagcact360
aacttcactt caggagagca aggaacagtg tggctcttcc atttttcagt tctgtaagca420
catcaccctt ttctcctccc cttgagctgt gttctctgac agctgtttgt tggtaaagcc480
agcagccctt aaagcacgtc ccagccttgt ctctctgtg ctttccccca ccactgctgc540
tgcacgcctc atttgctggg ccactttagt ggtggaacca ttagaggctg agtgacttaa600
aggagattga gtctgtctcg accccgagag agagtgggat ggatggatgc atcgtctcat660
ttagaaagtg ttgcctctga ctctaacaca ctcttctctc tttctttacc gccctccctg720
tgtgcgtccc tgggggggagc tgggctaaac cccttccgtc cccctttctc ctcc 774

```

(2) INFORMATION ON SEQ ID NO. 70:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 426 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 70:

```

tagctccagt ctcagctgta tcattttcta actgattttt acaataaaaa tgagagtaaa 60
aatcagttac tctttctaga cattaattag cacatttacg ttaagactct aagtagtata120
aaatgtaaat tgctgtacc ctactaagtt actgtcagta aatactgtgt gcagtaaatg180
ttgagtatgg attaatgaa ggatacctct acaattattt cctttagtca aggttgtagc240
taagaattgg gcttctgaca tacattcttt ttaatctttt tctgattggg ttttatagca300
ctaaacctaa tttctaacat atttttacac ctgaaatcta cattctaata taaaggtttt360
tttttataac gttcctaaaa tttcaggccc tcagcaggca gtttttgctc cagttttctt420
caacag 426

```

(2) INFORMATION ON SEQ ID NO. 71:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1417 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 71:

```

gccaaaccttc cctcccccaa ccttgggggcc gccccagggt tcctgcgcac tgccctgttcc 60
tcctgggtgt cactggcagc cctgtccttc ctagaggagc tggaacctaa ttctcctgag 120
gctgaggagag ggtggagggt ctcaaggcaa cgctggcccc acgacggagt gccaggagca 180
ctaacagtac ccttagcttg ctttctctct cctcctttt tattttcaag ttctttttta 240
tttctccttg cgtaacaacc ttcttccctt ctgcaccact gcccgtagcc ttaccgcgcc 300
cgccaccttc ttgtaccccc actcttgaaa ccacagctgt tggcagggtc ccagctcat 360
gccagcctca tctcctttct tgctagcccc caaagggcct ccaggcaaca tggggggccc 420
agtcagagag ccggcactct cagttgccct ctggttgagt tggggggcag ctctgggggc 480
cgtggcttgt gccatggctc tgctgacca acaaacagag ctgcagagcc tcaggagaga 540
ggtgagccgg ctgcagggga caggaggccc ctcccagaat ggggaagggt atccctggca 600
gagtctcccg gagcagagtt ccgatgccct ggaagcctgg gagagtggg agagatccc 660
gaaaaggaga gcagtgtca ccaaaaaaca gaagaatgac tccgatgtga cagaggtgat 720
gtggcaacca gctcttaggc gtgggagagg cctacaggcc caaggatat gtgtccgaat 780
ccaggatgct ggagtttatc tgctgtatag ccaggctctg tttcaagacg tgactttcac 840

catgggtcag gtggtgtctc gagaaggcca aggaaggcag gagactctat tccgatgtat 900
aagaagtatg ccctcccacc cggaccgggc ctacaacagc tgctatagcg cagggtgtctt 960
ccatttacac caaggggata ttctgagtgt cataattccc cgggcaaggc cgaacttaaa1020
cctctctcca catggaacct tcctgggggt tgtgaaactg tgattgtgtt ataaaaagt1080
gctcccagct tggaagacca ggggtgggtac atactggaga cagccaagag ctgagtatat1140
aaaggagagg gaatgtgcag gaacagaggc gtcttcctgg gtttggctcc ccgttcctca1200
cttttccctt ttcattccca cccctagac tttgatttta cgatatctt gcttctgttc1260
cccatggagc tccgaattct tgcgtgtgtg tagatgaggg gcgggggacg ggcgccaggc1320
attgttcaga cctggtcggg gccactgga agcatccaga acagcaccac catctaacgg1380
ccgctcgagg gaagcaccgg gcggtttggg cgaagtc 1417

```

(2) INFORMATION ON SEQ ID NO. 72:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 691 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 72:

```

ctgccttcgc gtgcgtcggt tacgccagtt tgaaccaaag acgcccgaagg ttgaggccga 60
gttcagagc atgggggtctc gggtgtccca gccttttgag tcctatatca ctgcgcctcc120
cggtagcgc gccgcgcgcg ccaaacctgc gccccagct acaccggag cgccgacctc180
cccagcagaa caccgcctgt tgaagacctg ctggagctgt cgcgtgcttt ctgggttggg240
gctgatggg gcgggcgggt acgtgtactg ggtggcacgg aagcccatga agatgggata300
cccccgagt ccatggacca ttacgcagat ggtcatcggc ctcagcattg ccacctgggg360
tatcgttgtc atggcagacc ccaaaggga ggcctaccgc gttgtttgaa agtaccacca420
gtgaatctgt cttctgtctc tgtccctttc cccgtgacac acagagcagg catggaattt480
aatgggtgtt ctggacagac acttgtacat ggacagacat cactactgtg gatactacaa540
gactgaaaag aaaatcgtat gttgtcattc tctggctatg gagtgtttgt ggccttcaca600
gatttcacag gaaccaataa atccctcaga gaagtaaaaa aaaaaaaaaa aaaaaaaaaa660
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa a
691

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(2) INFORMATION ON SEQ ID NO. 73:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1705 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 73:

```

gattcggcat gaggacagag ccctttttga aaataaattg gcattggagt gttttaccct 60
ctagctgttt tacttagaat gtaacatatg ctgcctaccc acctcaaaat gtctgtactg 120
caagagggcc ctgggcctct gctttccata ttcacgtttg gccagagttg tagtcccaaa 180
gaagagcatg ggtggcagat ggtagggaat tgaactggcc tgtgcaatgg gcatggagca 240
caaggggtca cagcatgcct cctgccttac cgtggcagta cggagacagt ccagaacatg 300
gtcttcttgc cacggggtgt tgttgtctct ggtggtgctg catgtctgtg gctcaccttt 360
attcttgaaa ctgaggttta cctggatctg gctactgagg ctagagccca cagcagaatg 420
gggttgggco tgtggccccc caaactaggg ggtgtgggtt catcacagtg ttgccttttg 480
tctcctaaag atagggatct acttttgaag ggaattgttc ctcccaaata aatttgcttt 540
accttggtcc tttcttttgt gccagtattc aagtggata gctctgagca gggtcacatt 600
tggccaaacc tgacactgtc ttgctgcatt ctctttggc aaacatcagg gtcagaattc 660
aggatagccc ttcctagggc actggacttt ctggcatggg ggctgtgttt gcacaagtta 720
tttcatgtt acctggagag tgtccagagg ctgctctgag gctgaggtgt gttccccctt 780
gctgtgttcc agctgtcaga gggataccat cctagggctt gggaatccaa ggccacgaga 840
ctccttggtt tgtggtccga gatcctgtac taaggagggt ctggccagag gaacagacca 900
gcttttgcac aatgaagcgc aagggaaaca gtggtttgcc tgggtgtccta cctgtcctga 960
acctggtcct gtgggccatt gaaaagttag atctgtgatc tctggggttt ttgtggcttt 1020
gttcaatgct tccactctag ggcaggcaga gcagtctata ctctcccaag cctgcttgac 1080
ctccaagtag agctgataca gagatctgtg aatattgtga tagaaattct ttggtattca 1140
tacatttcag ctgcaagtca gcaatttccc aggtaccatg taagctataa aacagtcatt 1200
cttaagaca gaggatagct gtgactcatg ggatcatgag gtccatggct ggttgaggt 1260
tccctttttc ctctctcagg ttttgtctct tctgtgttg tccccagcaa gggagagact 1320
gtgggggtgga ttggggagaac agattaggag tatagcaaat gaaccagaa tgggaacagt 1380
gggagctaac tgtgaatgag gagagtacct gctgcaggac ctggaggtca ggtgtgaat 1440
ctgtattggc acaggggaata aatatcctgg cgtctggagc ctacacctct cctcaagtc 1500
cttcctgtga tactgccatg gcacaggatc tgagttgcag ctctgcaccc taaatcacac 1560
cctgggcatt gtctgggctg cagggtgcc aggttctgta cttgtgtcca gctgtggccc 1620
tggatgccgg aaactgggag gggtttcttg tgcccagaat gtagcctgta acgcttgggc 1680
gccttttaaa gccccccctg ggccc

```

1705

(2) INFORMATION ON SEQ ID NO. 74:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1516 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 74:

```

gtttattcctt agtagttgga actaatgtag tctgactaaa atacacatgg gtgtctgctc 60
tgtgatgttt aaacttatct gttttgtttg gttttcattt caggaagcag aagtgcgaagc 120
aaagcagcaa gcatgaacct taagcactgt gctttaagca tcctgaaaaa tgagtctcca 180
ttgcttttat aaaatagcag aattagcttt gcttcaaaaag aaataggctt aatgttgaaa 240
taatagatta gttgggtttt cacatgcaaa cattcaaaat gaatacaaaa ttaaaatttg 300
aacattatgg tgattatggg gaggagaatg ggatattaac ataaaattat attaataagt 360
agatatcgta gaaatagtgt tgttacctgc caagccatcc tgtatacacc aatgatttta 420
caaagaaaac acccttcctt ccttctgcca ttactatggc aacttaagtg tatctgcagc 480
tctacattaa aaaggagaaa gagaaataac ctgtctctca ttcctaagtt gcctcattaa 540
ttttcatgaa caagaatatg tacctttttg atgctatatt actgcgatta aaaagttctt 600
gcaggtaatg tttatgatat gttaaacgtt gtaatttctt atcgtaatta taacattccc 660
attcttttgt agatgaaact tctacatatt gaaccacaga ttttctgagc ttctaaatgt 720
agcctttcat tgcacatttc agtgatcaga atagatatcc ttttacacgc acaaaagcaa 780
tagattcatt cagtggacaa gttccttggt taactacaca gctatgatgg aatgatatat 840
ccaagttcct tgcctcagtg aaatatgcat atgtatatca tgaaagtggg atgccaagta 900
agcttaaaat ggcattctct agcaaagaga ttagactttt aaataactct tataaaacag 960
gttggcgatc atttcccaag attggtttcc cttgagtttt tgctaaaaca aatcttagta 1020
gttttgcccg tttaaaacaa ctacacaatg taaatgctac tattcctaag atatcttacc 1080
tttttatttc agtttagcca tgtattgtat gagtgtatta gtctaagcag tgagaatctt 1140
ttctatgcct ctattccagc aaaaagtaga agtatcaaat aaaaagggca acttttaaaa 1200
tattaagcct gaagacttct aaaaagacaa gaaacatggc ctaaataacc aacatagatt 1260
tacatagtaa gtttcacact accttattac caaaagcaaa cacctcttac tttaaactac 1320
attatcatgt atatctattg tatgctgggc tttacttttt gccaaaatca acatataatg 1380
aagagatgcc tttgtttcat gagattcaaa cttgatgcta tgctttaaaa taaactcagt 1440
acttttagaa acataaaaaa aaaaaaaaaa aggcgacccc ccgagtagtg ggcccgcgcc 1500
cggggatttt tccggg

```

1516

(2) INFORMATION ON SEQ ID NO. 75:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1490 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 75:

```

gaataaaggg ctggccagac ccagtggcgt cctttcccag acctttcttg gcacaaagcc 60
tttgcctgct ggcttgagg ccctgcgcc tacattctct ggaccccact atgtgcctgg 120
caaagggcta gtgccttgag gaaactgagg tagctgggtt ggtccccttc caggaattca 180
gagtctgggtg gcaggggcat gggaaataga cagatgtaat tctatagcct gggcctggca 240
ccctccacct ccacgcccc ccagcattgc cttacgcctc ccttgcccca cgtagatgg 300
tttcttccgg ttttgcactc tggctgcccc ttggagtctc ctggggagct gtaatatctc 360
tttgagagatt cagattgagc tggcttaggt tgtggcccag gcattgggca ttttggaagc 420
ccccaggtgt tttagccttg cagccaggcc gagagagagc ccctgagtca gatccccatg 480
gttttaggcac acctagcggg aggggtggct cctggacccc accgtgggtg gagagctgag 540
catgtgtgtg gctttagtgg ggtctgttag ttatgggggt ctgggcactg gagctgcagg 600
acacttggga tcccaggtca gaaaggcca gatgagcaac taggaaagac ttgggggcca 660
gggcggagtg ggtcacctg acactcttgt gagggccctt ctagtgcctg ctcacaccgg 720
aatttcattc actccaagaa gccatcaggg gtaagatacc ttcctttaa cgtcactaag 780
aaagaagagg cctgccggtg acacagtaag atgccattga tctaaagatg cgtcttgatt 840
tcagaaaggt ccggaagtgg aaagcaggtt tcagggtgc tgaggtacag ggttctcctg 900
taggccccag ggatggtctc aggggtgctg agtgcgtgcg tggtaaattg atggagccca 960
ggggcgccctc ctgccagtgt cctccaggca ctcaaaccta gcccttctga agccgacctc 1020
acgtgacctc acagccccctc ctgaaggcgc ctactgatg acggtgggtg gaataacagc 1080
ccccagagat gtccaggttt ggaaccccag gacgtgggaa agtgttacct tgcgtggcaa 1140
aagggaacccg gcgcctgtgc ttcagttcag gatttcgtgg tggggagatg accgtggatg 1200
gttgaggttg gccctgagta atcatggggg cccttataag ggaaggggag tcacgagggg 1260
ctgcgcatga agcaaggaag cttctggctg tgaagatggc aagaaggcct gggggccaggc 1320
gatgaggttg cccctggagg agctggaaaa ggcattggat tctgccccag agcctccgtg 1380
gagaaacaaa gccgcactga caagacttca gcctggtgaa aaccattttg gactcctgac 1440
ctctagaact gtaagataat aaattgggtg ggttttcaac ctctcaaatg 1490

```


(2) INFORMATION ON SEQ ID NO. 76:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 2513 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual
ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 76:

```

ctcgagccga ttcggtttca gcagaaagtg atggaaaaag aaactgaaaa ggcattttct 60
gaaatcgaag atgctgcatt cctggcccga gagaaagcga aacaagatgc tgaatattat 120
gctgcacaca aatatgccac ctcaaacaag cacaagttga ccccggaata tctggagctc 180
aaaaagtacc aggccattgc ttctaacagt aagatctatt ttggcagcaa catccctaac 240
atgttcgtgg actcctcatg tgctttgaaa tattcagata ttaggactgg aagagaaagc 300
tcaactcccct ctaaggaggc tcttgaaccc tctggagaga acgtcatcca aaacaaagag 360
agcacagggt gatgcaagag gtggaatgt tctccatata aagatgtggc ccaaggggtt 420
aagtgggaac aatcattata cggactcttc agatttacag agaacttaca cttcatctgt 480
tccacctctc ctgcatagt cctgggtgct ccaactgattg gaggatagag ccagctgtct 540
gacacacaaa tggcttttct agccacagtc ttatcaagta tcctatatgt attcctttct 600
aaactgctac tcatgaatga ggaaagtctg atgctaagat actgcctgca ctggaatgtt 660
aaacactaaa tatataacaa gctgtgtttt cctaagctga gatctgttga ataatgttta 720
cattcgtccc ccggggaaat gtatgctcag ccaccattca agagatgact gagaaggaga 780
tggttaagttc aagaagactg attgcacctg ggaccagggc cctttctttg ggatccagtc 840
ccagccttca tccatgtgat taagatccag gccgctgaag ttccccagga aatgatcttc 900
cacttgagca accttttact gctttgctac ccaaccagat tcttcataga gattcctaata 1020
ggtggcctgc agggacctga gctttgctac ccaaccagat cttgggttga agttgggttg 1080
cactagtttc ttgtattcat aaactcagag atacagaggg cttgggttga attgggttg 1140
agatgaaacc tttgctctga gccaaagctc tggggccttg cattccctgc attgggttg 1200
tgactgtcag catcactgcc gcagcatgct tgactaaggt acctggtttt agccacagcc 1260
acctccttgt atgttacctt tcagctctgg ccaagagtgg gacaggggtt taaccacaaa 1320
taggagcagc atgcaattcc tagtgacttg ctgcacagta ttgtatcata attacaggaa 1380
gtttttatatt ttaaaactgg atctggggtg tattcatttg ccccatcacc tctgtctaaa 1440
ggcccaagtc ctagggtctg catggtcaca agcacactga tgctccttaa gattgtttat 1500
ctggagccca catagtgtgg aacaaaaagt cacctagaaa gcacctcttg tcatcattgt 1560
ctccttccca cctggcccag agatgcttaa atccaagttg tttctccagc tgtcacctcc 1620
cccaggagat caggattcca ctgacgtcct gggcagccag tgaatttaat tttccatgag 1680
aaacaacaga gttaacctgt ggcattagga gacctacttc atgtggacco ttttttct 1740
tcagtttaac ttttctggag cagtgtgctg cgtagtctcg cctgagtttg tgcagcttgt 1800
taagacaact cttgtgtacg ctatgttgaa gctcaacaaa aaagtcatgg gaccacttct 1860
agaaatcttt cagctgtcag gcctgtcagt ctcatgacag tttgttggtt gtgccaacaa 1920
ctttattttg gaaaggaaaag cccagatttg aatgggtctt tcccctgggc cttatcctat 1980
agaggcattt gtaatatgga gaaaataatt tttcattttt gctcatttaa ttctataaa 2040
tctctttata aatgaatttt gtgttcttta gttctcctta aaagaacttt tgaattataa 2100
aaataaaaatc tttacctgtc gaattgttgc tgcagatgat tgttgtggaa aatctggatc 2160
attgacctct gtgctttcat tcctagagat gttttatagt tacatgagca aaagctgttg 2220
ccccaaagtg atggccctgg aggcggggct gaggaacagg gaaatgccgc tgtgaagtct 2280
taaagcactt ctgcttaaac tcccatgtgt gaggagtgtg cctccctgtg cctctcagc 2340
tctgaggctg gccgtcttcc ggggtgttcc ttttgcaaaa tatacactgt aatcttgagt 2400
ctaaatttat atgttgaaat gctacctttt ttaaaataag aaactaaata aaattatttt 2460
actatcaaaa aaaaagaaaag gggagggaag ggggcggagg gggtaggagg gggggggggg 2513
gagggggggg aggggaatgt ctcgagaggg ggggggtggg ggcgcctcgc agc

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(2) INFORMATION ON SEQ ID NO. 77:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1962 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 77:

```

accgacggcc gcccttttc gtctttttt tttttacatt tcaaatatat tttattactt 60
tccatcttag aaagaatat aaacctgcat gcaatgctaa tggtttctga catgtacata 120
gcatataaca cagcagtaca atgcggcata tactgggggg cagtgtgtgg agggggcggt 180
cttaagggtta tatgtacaga ggaaagggcg catggtcata ttagctttcg aaagaggact 240
gcactgttta acattgaaga attacatggg gaatcacaaa tatattgctt tagtactgca 300
tgttctgttg tggtagggga aagaaacatg ctttgaagggt tttcccttgt caacagaatg 360
tgtgtctgta gctgtgtatt gcgcatgtat tcatatattt ttaagttttc tcctaagggt 420
tttgctgaca gtgttgggaa cctcacatgc ttctgaagca ttaaattattg aacctgtgaa 480
cctttcagaa atcctcaggt tgggaaagac cccacacctt ctttaaggat catttgtctc 540
gccatcacag gatcttggaa atgtttccta ggggtgtgtaa aaattaacca ggggggaatg 600
aagcacattt ttctggcaac caaacttgag ttcctcagag aacagatgca gagagacctg 660
ctcctgcttg cccggctaca ggggccactg tggagtcaca ctgaggctgt gaccggccat 720
aagcccagga gagcccgtag cagctgtgcc gaggcgccag gacctctaag cggaagcttc 780
ccaagctagg aatggagcaa cactgcaatg aaatgtgtcc accaagctca ttgttcctcc 840
cgggcgctta taaagctcag atgtatagt acgtatggac aaatacaaaa aaaaaaaaaa 900
aaaaaaaaaa aaaaaaagcc tttctttctc acaggcataa gacacaaatt atatattgtt 960
atgaagcact ttttaccac ggtagctttt tacattttat agctgcgtgc gaaaggcttc1020
cagatgggag acctatctct cttgtgtctc agacttcata acaggctgct ttttatcaaa1080
aaggggaaaa ctcatgcctt tcctttttta aaaatgcttt tttgtatttg tccatacgtc1140
actatacatc tgagctttat aagcgcccg gaggaacaat gagcttggtg gacacatttc1200
attgcagtgt tgctccattc cttagcttggg aagcttcgcg ttagaggctc tggcgccctc1260
gcacagctgc cacgggctct cctgggctta tggccgggtc cagcctcagt gtgactccac1320
agtggccctt gtagccgggc aagcaggagc aggtctctct gcatctgttc tctgaggaac1380
tcaagtttgg ttgccagaaa aatgtgcttc attccccct ggtaattttt tacacaccct1440
aggaacattt tccaagatcc tgtgatggcg agacaaatga tccttaaaga aggtgtgggg1500
tctttcccaa cctgaggatt tctgaaagg tccacaggttc aatatttaat gcttcagaag1560
catgtgaggt tcccaacact gtcagcaaaa accttaggag aaaacttaaa aatatatgaal620
tacatgcgca atacacagct acagacacac attctgttga caagggaaaa ccttcaaagc1680
atgtttcttt ccctcaccac aacagaacat gcagtactaa agcaatatat ttgtgattcc1740
ccatgtaatt cttcaatgtt aaacagtgc gtcctctttc gaaagctaag atgaccatgc1800
gccctttcct ctgtacatat acccttaaga acgccccctc cacacactgc cccccagtag1860
tacgcaggca ttggtaccgg ctggtgttaa aatggctatg ggacatggtc aggaaccat1920
ttaggcattg gcattgaggg ttccataatc cgtttctaag ga 1962

```

(2) INFORMATION ON SEQ ID NO. 78:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 788 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 78:

```

cgttgcccc gccgcggg cgagatggat tccgggtgct ggttggtcgg cggcgagttc 60
gaggactcgg tgttcgagga gaggccggag cggcggtcag gaccgcccgc gtcctactgc120
gccaagctct gcgagccgca gtggttttat gaagaaacag aaagcagtga tgatggtgaal80
gtgctgactc tcaagaaatt caaaggagac ctggcctaca gacgacaaga gtatcagaaa240
gcactgcagg agtattccag tatctctgaa aaattgtcat caaccaattt tgccatgaaa300
agggatgtcc aggaaggcca ggctcgggtg ctgggtcacc tgggtaggca tatggaggcg360
ctggagattg ctgcaaactt ggaaaataaa gcaaccaaca cagaccattt aaccacggta420
ctctacctcc agcttgctat ttgttcaagt ttgcagaact tggagaaaac aattttctgc480
ctgcagaaac tgatttcttt gcctcctttt aatccttgga actggggcaa attggcagag540
gcttacctga atctggggcc agctctttca gcagcacttg cgtcatctca gaaacagcac600
agtttcacct caagtgacaa aactatcaaa tccttctttc cacactcagg aaaagactgt660
cttttggtgt ttctgaaac cttgcctgag agctctttaa ttttctgtgg aagggatacg720
aggaatggca ggaaaattgg gaagttttgc aaatgtgcca acctggttgg agaaaggggg780
acaggttt

```

788

(2) INFORMATION ON SEQ ID NO. 79:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 299 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

(A) ORGANISM: HUMAN

(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 79:

```
aacctccctc gaggaattg atcttcagcc ctccacctc acaatctaca cagcagcctt 60
gaaggaaaag acgccagact tcagacgtct ctctcctcgc gtctcggaga ccgaggactc120
ccgtaagggtc gcccggtgggc cccgatttgt aatgcggggac aaccccgggc gcgggggtga180
tcataggggt ctccaggcgc cggggtggat gaaggagggt cggggatggg gggttttgta240
aagggggctg tagaaggcgg aaggaaggat gaaatttggg aggggggggg gggggtcac 299
```

(2) INFORMATION ON SEQ ID NO. 80:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 2263 base pairs

(B) TYPE: Nucleic acid

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual
ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

(A) ORGANISM: HUMAN

(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

attacgacaa	ctctttctaca	tgtagaagaag	gaagagtatt	ccctgggaag	atttcagtga	60
cagtatcaga	aacatttgac	ccagaagaga	aacattccat	ggcctatcaa	gacttgcata	120
gtgaaattac	tagcttggtt	aaagatgtat	ttggcacatc	tgtttatgga	cagactgtaa	180
ttcttactgt	aagcacatct	ctgtcaccaa	gatctgaaat	gcgtgctgat	gacaagtttg	240
ttaatgtaac	aatagtaaca	atthttggcag	aaaccacaag	tgacaatgag	aagactgtga	300
ctgagaaaa	taataaagca	attagaagta	gctcaagcaa	ctttctaaac	tatgatttga	360
cccttcggtg	tgattattat	ggctgtaacc	agactgcgga	tgactgcctc	aatggtttag	420
catgcgattg	caaatctgac	ctgcaaaagg	ctaaccacaa	gagccctttc	tgcgttgctt	480
ccagtctcaa	gtgtcctgat	gcctgcaacg	cacagcacaa	gcaatgctta	ataaagaaga	540
gtgggtgggg	ccctgagtg	gcgtgcgtgc	ccggctacca	ggaagatgct	aatgggaaact	600
gccaaaagt	tgcatttggc	tacagtggac	tcgactgtaa	ggacaaaatt	cagctgatcc	660
tcactattgt	gggcaccatc	gctggcattg	tcattctcag	catgataatt	gcattgattg	720
tcacagcaag	atcaaataac	aaaacgaagc	atattgaaga	agagaacttg	attgacgaag	780
actttcaaaa	tctaaaactg	cggtcgacag	gcttcaccaa	tcttggagca	gaagggagcg	840
tctttcctaa	ggtcaggata	acggcctcca	gagacagcca	gatgcaaaat	ccctattcaa	900
gcacacgacg	catgccccgc	ctgactattt	agaatcataa	gaatgtggaa	cccgccatgg	960
cccccaacca	atgtacaagc	tattattttag	agtgtttaga	aagactgatg	gagaagttag	1020
caccagtaaa	gatctggcct	ccgggggttt	tcttccatct	gacatctgcc	agcctctctg	1080
aatggaagtt	gtgaatgttt	gcaacgaatc	cagctcactt	gctaaataag	aatctatgac	1140
attaaatgta	gtagatgcta	ttagcgcttg	tcagagaggt	ggttttcttc	aatcagtaca	1200
aagtactgag	acaatggtta	gggttggttt	cttaattctt	ttcctggtag	ggcaacaaga	1260
accatttcca	atctagagga	aagctcccca	gcattgcttg	ctcctgggca	aacattgctc	1320
ttgagttaag	tgacctaat	ccccctggag	acatacgcat	caactgtgtg	gggtccgagg	1380
gatgaaag	gatcccacc	accttccaag	ggtcacagc	tcactctctg	acaagtccag	1440
ataggacac	tgcttctatc	cctccaatgg	agagattctg	gcaacctttg	aacagcccag	1500
agcttgcaac	ctagcctcac	ccaagaagac	tggaaagaga	catatctctc	agctttttca	1560
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gtaaaaaaca	tgacctggt	gaagggaag	aggcaaagga	aactgggtgg	ggaggatcaa	1740
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gagcacttct	ctaatacatg	cctcccgaag	actggctggg	agaaggttta	aaaacaaaaa	1860
atccaggagt	aagagcctta	ggtcagtttg	aaattggaga	caaactgtct	ggcaaaaggt	1920
gcgagaggg	gcttgtgctc	aggagtccag	ccgtccagcc	tcgggggtga	ggtttctgag	1980
gtgtgccatt	ggggcctcag	ccttctctgg	tgacagaggc	tcagctgtgg	ccaccaacac	2040
acaacacac	acacacaacc	acacacacaa	atgggggcaa	ccacatccag	tacaagcttt	2100
tacaaatggt	attagtgtcc	ttttttattt	ctaattgcct	gtcctcttaa	aagttatttt	2160
atttgttatt	attatttgtt	cttgactgtt	aaattgtga	ggtaatgcaa	taaagtgcct	2220
ttgttagatg	gtgaaaaaaa	aaaaaaaaaa	aaaaaaaaaa	aaa		2263

(2) INFORMATION ON SEQ ID NO. 81:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1284 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 81:

```

aaaaatgggc taaactagct ccagagaact tgtgaattct ttgctaaagc ctctggcaaa 60
aacggcattt gatgaagcaa ttgctgaatt ggatacgctg aatgaagagt cttataaaga 120
cagcactctg atcatgcagt tacttaggga caatctcact ctgtggacat cggaaaacca 180
gggagacgaa ggagacgctg gggagggaga gaactaatgt ttctcgtgct ttgtgatctg 240
ttcagtgtca ctctgtaccc tcaacatata tcccttgtgc gataaaaaaa aaaaaaaaaa 300
aaaaaagagt cgtacgtcga ctttcgattt ttcacagcct cagcctagga aaaatggttc 360
atgggataaa cagctgggat ttgtatctaa aactcagatt ggtcacataa atgccacggc 420
attccgaagt tttgattttg attaacattg acaggattac tgtgtgttta attttttaa 480
aactgaacac tgtgattatg gggttttgta atttagcaga actcttactg gtagaaaaaa 540
tagacctgaa ttatgtgtaa ctttttgtaa ggtttaatct gatatcaaaa taatcattga 600
aatacaattc cattgtaaag ttgtacagaa agttatagag attatattgt gatgctggaa 660
cttgaggatga gacacacatc atttggcatt tgagttgaat ggtaattcac agtaatgctg 720
ccgttgttcg ggacttaaag acacttgacc tgtttgggct gttgccactt aaaagttcat 780
gaccacaaat gtccacagtg tcttcctctg aggaaactcg aatcctgaaa tggaaattct 840
ttgtggcaga taactggctt atgacacctt gaaaagttca agtgctcata taacacacca 900
cactgaaccc cctttcctac agcaatatgt tcactatgtt accaatttgc aacttgtgct 960
tcaatagtgg aatctacttt cattgttaac actgagctaa agaaaaaaag ccgtgtgttt 1020
tatgaatgac cttatctgtt tcctggataa tacctttaag aataatgtcc tgagtcaggc 1080
gtgggtgtgc gtgcatctag tcccaactat ttgggaggct gaggcaggag gatcgcttgall 1140
gccaggaggt ttaaagctgc agtgccctgt ggttgacact gtgaataact gcactccagc 1200
ctgggcaaca tagcgagacc tcacttccaa aaaagaaaaa aacacaaaag gatgtgtctg 1260
taagaggctt ccctggggga ccag

```

(2) INFORMATION ON SEQ ID NO. 82:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1335 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 82:

```

gggtgacata atgacaggtt aaatatttgt gattcattga ttaaataatta tttaaagaaa 60
tgtaaattca caataagggt tgaaaattat ttggtttcat ccattgtctc ttatttcagg 120
accaagcagc aaactgcagt agtttgtaga ggattctaata atgggggttca ggaatagcct 180
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ttacagtgtc acagtataca ctgctcattt atcctattct catgtgcttt cttctttagt 480
aagattattt taagaaaata agtgatattt aaagtccaaa gaggaatgat cacagtgtga 540
taaggggtgt tttccactt gaactctgat gtcagtcgac tgtgggtcag agctacaacc 600
atctgtttgg tttgatgttt tgggtggtta cttacggagt ggggatagtg tgagacctaa 660
ttccctgtgc aaatgtctct tattccagaa atgtgcattt tgtcatctat aagcaagaaa 720
tatgggcata gcagctcttg gtttaaagtt tgccataacc tgttcattgt tgttttaagc 780
tcaggtaaaag ataacctcct ctttctatga ctccagtttc cattcaggtt atagtattat 840
tcaatagtgtg attttctttt taagctgggc aataaattga tgtttccaga tggtaacatg 900
ggagagggca tataggataa agatgagcaa attctaccct aaaaatgttc tagtagttca 960
caggaagaag atgaggttta ataactttca aggttaattct agattgacat tttgagggga 1020
aaatgggctc ttgttctagt tgaagtgagc agagaaggct ataaattaat atgtaactta 1080
cagcattcca gaggttaaaa ataactgatg cagatgtact tcttcagtgt gattcttcag 1140
atcaaacttt tacttttggc atagttaatt tcagaaaaat gtgctgtatg tgtgtgtgt 1200
tgaggggttg tcttgctgat ccttcagtta gctctaaatt ctggcaactc cttgtaattc 1260
ccatgtattt gataccatga accaatcatg ttgaatgcgt ttggtgatct ggggagcctc 1320
ccccgtcttc ccagg

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(2) INFORMATION ON SEQ ID NO. 83:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1890 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing.

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 83:

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ggcttgtggc ggctctgcc caggggcagg tgttgagggg ctcccgggtcc ggctgccgcc 60
gctccccgcg tccggacccg gggctcccc tagcgccgct gaggagccgc ctctgcggtc 120
caggagggcg caggagcggg actgagagcg cctggaggct cgagcagagg atagaaggac 180
aaggacagaa tcaccagcac tggctgaagg taccttaaca tggggaatct tcttaaagtt 240
ttgacatgca cagaccttga gcaggggcc aattttttcc ttgattttga aaatgccag 300
cctacagagt ctgagaagga aatttataat cagggtgaatg tagtattaaa agatgcagaa 360
ggcatcttgg aggacttgca gtcatacaga ggagctggcc acgaaatacg agaggcaatc 420
cagcatccag cagatgagaa gttgcaagag aaggcatggg gtgcagttgt tccactagta 480
ggcaaattaa agaaatttta cgaattttct cagagggttag aagcagcatt aagaggctct 540
ctgggagcct taacaagtac cccatattct cccaccagc atctagagcg agagcaggct 600
cttgctaacc agtttgcaga aattcttcat ttcacactcc ggtttgatga actcaagatg 660
acaaatcctg ccatacagaa tgatttcagc tattatagaa gaacattgag tcgtatgagg 720
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tttgatcag agaataaaaa ttaccaata gaaaatacca cagattgttt aagcacaatg 900
gctagtgtat gcagagtcac gctggaaaca ccggaataca gaagcagatt tacaatgaa 960
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gtaatacttt tgtttaaagt ttaagtttg caatttgact tttttgttaa ggtgtatgt 1740
tgtgtgttta acctttatta actaacgtta aaagctgtga tgtgtgcgta gaattacg 1800
tatgtcatgt catgtctaaa gaatggctgt tgatgataaa ataaaaatca gctttcattt 1860
ttctaaaaaa aaaaaaaaaa aaaaaaaaaa

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1890

(2) INFORMATION ON SEQ ID NO. 84:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1829 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 84:

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gaccaacctg acgcagatcg agctgcgggg caaccggctg gagtgcctgc ctgtggagct 60
gggcgagtgc ccactgctca agcgcacggc ttggtggttg aggaggacct gttcaacaca 120
ctgccaccgg aggtgaagga gcggctgttg agggctgaca aggagcaggc ctgagcgagg 180
ccggcccagc acagcaagca gcaggaccgc tgcccagtc tcaaggcccg aggggcaggc 240
ctagcttctc ccagaactcc cggacagcca ggacagcctc gtggctgggc aggagcctgg 300
ggccgcttgt gagtcaggcc agagcgagag gacagtatct gtggggctgg ccccttttct 360
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gcagtatttg gataatcagg gtctcctccc tggaggccag ctctgccccca ggggctgagc 480
tgccaccaga ggctcctggga ccctcacttt agttcttggg atttattttt ctccatctcc 540
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ttcagggaaa ggtgggctgc cttttccctt tgccttatt tagcgatgcc gccgggcatt 660
taacaccacac ctggacttca gcagagtgtt ccggggcgaa ccagccatgg gacggtcacc 720
cagcagtgcc gggctgggct ctgcggtgcg gtcacggga gagcaggcct ccagctggaa 780
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aaggcacgtt ttagagtctc ttgtcttaat gattatgtcc atccgtctgt ccgtccattt 1680
gtgttttctg cgctgtgtca ttggatataa tcctcagaaa taatgcacac tagcctctga 1740
caaccatgaa gcaaaaatcc gttacatgtg ggtctgaact tgtagactcg gtcacagtat 1800
caaataaaat ctataacaga aaaaaaaaaa

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(2) INFORMATION ON SEQ ID NO. 85:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 2358 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual
ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 85:

cgaaacgccc	cgagtgagg	cagttccgct	ggctagtgtg	tacgcggcga	gcttctccc	60
gcgcgcgccg	ctcggtccc	atagcgccc	cgacagggtc	cggacgcgc	ccgaacatgg	120
actccgccc	ccaagatata	aacctgaatt	ctcctaaca	aggtctgctg	tctgactcca	180
tgacggatgt	tctgtcgac	acaggtgtgg	ctgcccggac	tctgtctgtt	gagggctga	240
cagaggctga	ggaggaggag	ctcagggctg	agcttaccaa	ggtggaagag	gaaattgtca	300
ctctgcgcca	ggctctggca	gccaaaggaga	ggcactgtgg	agagctcaag	aggaggctgg	360
gcctctccac	cctggggggag	ctgaaacaga	acctgtccag	gagctggcat	gacgtgcagg	420
tctctagcgc	ctatgtgaaa	acttctgaga	aacttgga	gtggaatgag	aaagtgaccc	480
agtcagacct	ctacaagaag	actcaggaaa	ctctttcaca	ggcaggacag	aagacttcag	540
ctgcccctgtc	cacagtgggc	tctgccatca	gcaggaagct	tggagacatg	aggaactctg	600
cgaccttcaa	gtcgtttgag	gaccgagttg	ggaccataaa	gtctaagggtt	gtgggtgaca	660
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cactgtgctg	tcttctctag	gggtgcagga	agtggacagg	gcggagggtt	tgaagaata	1020
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tgactcacag	aaggaatgca	atcaccagc	aagtctacc	tgttacgcaa	tttttatct	1200
caaaatgccg	aacgagaaaa	ctgtccattt	tctgagacc	ccagaaagga	aactgacct	1260
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tgtgggggtg	ggtgagaagg	caggttgtgc	gggtgttgac	cgatgtatct	tttcttaaaa	2280
gttattataa	taatgggtaa	tttgtcaata	aagcattcct	ttgggggaaa	aaaaaaaaaa	2340
aaaaaaaaaa	aaaaaaaaaa					2358

(2) INFORMATION ON SEQ ID NO. 86:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1646 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 86:

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cagctgcgga actgcgcgat tgtggttccc gccgtatttc ccgttcccca tctagtaact 60
cccatctcag cccacgtatc tccctgagtg gaaatctcgg gccccagacc agtcgattgg 120
gaggtecgcc ctccccttca gcgacttggt ctgtgttttg gcagttgccg cgacaacagt 180
cacttccggg aagggggtct gcgaatctcc ttccgtcggt ccgctcagaa tcagctgtcc 240
tctcagactg tgtgggtggg ttccccggcc gcagctccgt acgggcttgg attgctgggc 300
ctcgggtgcac cccagcctcc cccactcggt ttctgagctt gagctggcgg ctctttaact 360
ctgcttcact gttgctcttg gcaacatcca cttccgggag cgagtgccgt ttcccccgct 420
caccgcgggc tagggagcgt gggattccgg actgtgagcg gctgttagtg cgtcgagct 480
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ttaaaaagga tgatattgga cgaaggaatg ggcaagctcc aaatgagaag atgaagcaag 900
tgttaaagaa gactatagaa gaagccaaag caataatatc taagaaacaa gtggaagccg 960
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aagttcacca gctgatgaca cttccaaaga gattagctca cttttctcct aggcatttat 1500
aatttaaaaa aaaaaaaaag gccacttact gccctctgta aaagatgtta acatttctag 1560
ttttctttta gtgtgaattt taaaatagc agttattcaa ggtttttaga ctttaataaat 1620
acctagtcag aagaaaaaaa aaaaaa

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1646

(2) INFORMATION ON SEQ ID NO. 87:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 3096 base pairs
- (B) TYPE: Nucleic acid.
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual
ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 87:

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gcgggtgacg cgacgacggc tcgacacttt gctacggagt gcatcggacg tcgaagccta 60
gagtctctgc gtctttccct cttccgctgc ctcattcctt tccttcctag ccttggtcgt 120
cgccgccacc atgaacaaga agaagaaacc gttcctaggg atgcccgcgc ccctcggcta 180
cgtgccgggg ctgggccggg gcgccactgg cttcaccacg cggtcagaca ttgggcccgc 240
ccgtgatgca aatgaccctg tggatgatcg ccattgcacc ccaggcaaga gaaccgttgg 300
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gctgagcatc cccgaggttg gcgatgccag aaataaacgt cagcgggaacc cacgctatga 660
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aagtggctgg caggggatgt gcctgcagca aggagcatcc tggccctggc cttccaggcc 2040
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acatcgccaa ctggcagaag aagatcgggg acatccttag gctggtggcc ggccgcata 2940
agaacacctt ctgattgagc ggttgccatg gccgtctcc gtggggcagg gttggggcgc 3000
atgtggaagg gctctgagct gtgtcctcct tcattaaaag tttttatgtc tctgttcaga 3060
aaaaaaaaa aaagaaaaaa gggggcgccc gggggc
3096

```

(2) INFORMATION ON SEQ ID NO. 88:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1906 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 88:

```

gcgctcgctg aggcaagagg agggcactcg gccgcggcct gacaggggact tagcccacag 60
agaccggccc gcgcgcgcga cccacacccc acccactcgt ccacctaccc actccccgcg 120
ccgcctcctc ccacctgag cagagccacc gaggatgata aacacccagg acagtagtat 180
tttgccgttg agtaagtgtc ccagctcca gtgctgcagg cacattgttc cagggcctct 240
gtggtgctcc tgatgccct caccactgt cgaagatccc cggtgggcga gggggcgga 300
gggatccttc tctctcagct ctaatatata aggacgagaa gctcactgtg acccaggacc 360
tcctgtgaa tgatggaaaa cctcacatcg tccacttcca gtatgaggtc accgaggtga 420
aggtctcttc ttgggatgca gtctgttcca gccagagcct gttttagtaa atcccagatg 480
gattattagc tgatgggagc aaagaaggat tgtagcact gctagagttt gctgaagaga 540
agatgaaagt gaactatgtc ttcatctgct tcaggaaggg ccgagaagac agagctccac 600
tcctgaagac cttcagcttc ttgggctttg agattgtacg tccaggccat ccctgtgtcc 660
cctctcggcc agatgtgatg ttcatggttt atcccttga ccagaacttg tccgatgagg 720
actaatagtc atagaggatg ctttacccaa gagccacagt gggggaagag ggggaagttag 780
gcagccctgg gacagacgag agggctcctc gctgtctagg gaaggacact gaggggctca 840
gggtgagggt tgccatttgt gtctctggag ttgactcgtt gaaattgttt tccataaaga 900
acagtataaa catattattc acatgtaatc accaatagta aatgaagatg tttatgaact 960
ggcattagaa gcttttctaaa ctgcgctgtg tgatgtgttc tatctagcct aggggaggac1020
attgcctaga gggggaggga ctgtctgggt tcaggggcat ggcctggagg gctggtgggc1080
agcactgtca ggctcagggt tccctgctgt tggctttctg ttttggttat taagacttgt1140
gtattttctt tctttgcttc ctgtcacccc aggggctcct gagtataggc ttttcagtcc1200
ctgggcagtg tccttgagtt gttttttgac actcttacct gggcttctct gtgtgcattt1260
gcgtctggcc tggagtaagc aggtccgacc cctccttctt tacagcttag tgttattctg1320
gcatttggtt aagctggctt aatctgttta atgttatcag tacattttaa ataggggcat1380

tgaattttac tcccaccacc agggcttttt tgggggatgc ctgggccttt aaaacactag1440
ccaaactcta attaatctc aaatcactgc caggagttct tgctcctggc tgcaggccca1500
ggccccaagg tctccttctt ggggtcacaa acagcagtaa ggaagaggaa tatatagcaa1560
ctcagggcct gggaattgtg gggcaatccg ttcttaggga ctggatactt ctggctggct1620
gagtatagta ctagctgcct ccccaccagg ttccgagtag tgtctgagac tctgctctgc1680
agggcctagg gtagcgtgg gagtgtagaa gtggcctgcc cttaactgtt ttactaaac1740
agctttttct aaggggagag caagggggag agatctagat tgggtgaggg ggacggggat1800
gtcagggagg caagtgtgtt gtgttactgt gtcaataaac tgatttaaa ttgtaaaaaa1860
aaaagaaagg ggggggggtg aggggagggg gggggaaaaa aaaaaa 1906

```


(2) INFORMATION ON SEQ ID NO. 90:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 349 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 90:

```

gctaagagga caagatgagg cccggcctct catttctcct agcccttctg ttcttccttg 60
gccaagctgc aggggatttg ggggatgttg gacctccaat tccagcccc ggcttcagct120
ctttcccagg tggtgactcc agctccagct tcagctccag ctccaggteg ggctccagct180
ccagccgcag cttaggcagc ggaggttctg tgtcccagtt gttttccaat ttcaccggct240
ccgtggatga ccgtgggacc tgccagtgtc ctgtttccct gccagacaac aactttccc300
tggacagagt ggaacgttgg aattcacagc tcatagttat ttctcagag 349

```

(2) INFORMATION ON SEQ ID NO. 91:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 2142 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 91:

```

cagacccaga aagtagtgac cagccctcct cggattaccc ttcattggct cctcccttgc 60
gccgcccacc ctccagattt gcataaaaaa ggccaagaaa actctggctg tgccccagca 120
acggctcatt ctgctccccc gggtcggagc ccccgaggc tgcgcgcggg cttgcagcgc 180
ctcgcccgcg ctgtctctcc ggtgtcccgc ttctccgcgc cccagccgcc ggctgccagc 240
ttttcggggc cccgagtcgc acccagcgaa gagagcgggc ccgggacaag ctggaactcc 300
ggcgcctcgc cccttccccg gctccgctcc ctctgcccc tcggggtcgc gcgcccacga 360
tgctgcaggg ccctggctcg ctgctgctgc tcttcctcgc ctcgactgc tgctgggct 420
cggcgcgcgg gctcttcttc tttggccagc ccgacttctc ctacaagcgc agaattgcaa 480
gcccattccc gccaacctgc agctgtgcca cggcatcgaa taccagaaca tgcggctgcc 540
caacctgctg ggccacgaga ccatgaagga ggtgctggag caggccggcg cttggatccc 600
gctggtcatg aagcagtgcc acccggacac caagaagttc ctgtgctcgc tcttcgcccc 660
cgtctgcctc gatgacctag acgagaccat ccagccatgc cactcgctct gcgtgcagg 720
gaaggaccgc tgcgccccgg tcatgtccgc cttcggcttc ccctggcccc acatgcttga 780
gtgogaccgt ttccccccag acaacgacct ttgcatcccc ctcgctagca gcgaccacct 840
cctgccagcc accgaggaag ctccaaagggt atgtgaagcc tgcaaaaata aaaatgatga 900
tgacaacgac ataattgaaa cgctttgtaa aaatgatttt gcaactgaaa taaaagtga 960
ggagataacc tacatcaacc gagataccaa aatcatcctg gagaccaaga gcaagaccat 1020
ttacaagctg aacgggtgtg ccgaaaggga cctgaagaaa tcggtgctgt ggctcaaaga 1080
cagcttgcatg tgcacctgtg aggagatgaa cgacatcaac gcgccctatc tggctatggg 1140
acagaaacag ggtggggagc tggatgatcac ctcggtgaag cgggtggcaga aggggcagag 1200
agagttcaag cgcattctcc gcagcatccg caagctgcag tgctagtccc ggcattcctga 1260
tggctccgac aggcctgtc cagagcacgg ctgaccattt ctgctccggg atctcagctc 1320
ccgttcccca agcacactcc tagctgtctc agtctcagcc tgggcagctt cccctgectc 1380
tttgacgctt tgcattcccc gcatttctct agttataagg ccacaggagt ggatagctgt 1440
tttcacctaa aggaaaagcc caccogaatc ttgtagaaat attcaaacta ataaaatcat 1500
gaatattttt atgaagttaa aaaatagctc acttttaaagc tagttttgaa taggtgcaac 1560
tgtgacttgg gtctggttgg ttgttgtttg ttgttttgag tcagctgatt ttcacttccc 1620
actgaggttg tcataacatg caaattgctt caattttctc tgtggcccaa acttgtgggt 1680
cacaaaccct gttgagataa agctggctgt tatctcaaca tcttcatcag ctccagactg 1740
agactcagtg tctaagtctt acaacaattc atcattttat accttcaatg ggaacttaaa 1800
ctgttacatg tatcacattc cagctacaat acttccattt attagaagca cattaaccat 1860
ttctatagca tgatttcttc aagtaaaaagg caaaagatat aaattttata attgacttga 1920
gtactttaag ccttgtttta aacatttctt acttaacttt tgcaaattaa acccattgta 1980
gcttacctgt aatatacata gtagtttacc tttaaaagtt gtaaaaatat tgctttaacc 2040
aacactgtaa atatttcaga taaacattat attcttgat ataaacttta catcctgttt 2100
tacctataaa aaaaaaaaaa aaaaaaaaaa aaaaaaggg aa 2142

```

(2) INFORMATION ON SEQ ID NO. 92:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1111 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 92:

```

cgtgggcgaa catgggagct gttcctcgcg ggccgcccgg tgctgggtcac cgggggcaggc 60
aaaggtatag ggcgcgccac ggtccaggcg ctgcacgcga cgggcgcgcg ggtgggtggct 120
gtgagccgga ctcaggcgga tcttgacagc cttgtccgcg agtgcccggg gatagaaccc 180
gtgtgcgtgg acctgggtga ctgggaggcc accgagcggg cgctgggcag cgtgggcccc 240
gtggacctgc gcggagactg cgccgacatg gagctgttcc tcgcgggccg ccgggtgctg 300
gtcaccgggg caggcaaagg tataggcgcc ggacaggtcc aggcgctgca cgcgacgggc 360
gcgcgggtgg tggctgtgag ccggactcag gcggatcttg acagccttgt ccgcgagtgc 420
ccggggatag aaccctgtgt cgtggacctg ggtgactggg aggccaccga gcgggcgctg 480
ggcagcgtgg gccccgtgga cctgctggtg aacaacgccg ctgtcgccct gctgcagccc 540
ttcctggagg tcaccaagga ggcctttgac agatcctttg aggtgaacct gcgtgcggtc 600
atccaggtgt cgcagattgt ggccaggggc ttaatagccc ggggagtcce aggggccatc 660
gtgaatgtct ccagccagtg ctcccagcgg gcagtaacta accatagcgt ctactgctcc 720
accaaggggt ccctggacat gctgaccaag gtgatggccc tagagctcgg gccccacaag 780
atccgagtga atgcagtaaa ccccacagt gtgatgacgt ccatgggcca ggccacctgg 840
agtgaacccc acaaggccaa gactatgctg aaccgaatcc cacttggcaa gtttgctgag 900
gtagagcacg tgggtgaacgc catcctcttt ctgctgagt accgaagtgg catgaccacg 960
ggttccactt tgccggtgga agggggcttc tgggcctgct gagctccctc cacacacctc 1020
aagcccatg ccgtgctcat cctaccccca atccctcaa taaacctgat tctgctgccc 1080
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa g 1111

```

(2) INFORMATION ON SEQ ID NO. 93:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 657 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 93:

```

atttaaagcc tggattgtaa ccagattttc ttttttcccc cttctcagct gtagatatga 60
tatctccttt cagggcccca gcttaagggc aaagtgagtt aatgtgtaga caaaggcgag120
ggacaagaga gagttaacat ctagacagtg gaaaaagcca tgggtgtgtgg tttctgggaa180
ccaccaacac ttgcaggttt agctttttcc cagggttgac tacaagaaag aaaaccatgt240
ttttgcaaga ttaaaatgtg gttgagtggt cctaaattaa ccatcccat ttttatcata300
tttccacat cacttcaggg ttttaagagt cagtgtcac ctgggcggac tggtagtaca360
ttttgcttct tagaaagcta agtcctgggt tccgtctgat tttaggttcc aggaacttcc420
tgagaacacc cgatcgaga gggtaatttt ctggagtttg ttttgcaggg atagctggga480
gtatggccac cctgtccac gatgcggtaa tgaatccagc agaagtgggt aagcagcgct540
tgcagatgta caactcgag caccggtcag caatcagctg catccggacg gtgtggagga600
ccgagggggt gggggccttc taccggagct acaccacgcc gagccctatc tcgtgcc 657

```

(2) INFORMATION ON SEQ ID NO. 94:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 863 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 94:

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gcggtcggta gtgcggcgct gtttaaagat ggcgggcgag gaacctcagc agcagaagca 60
ggagccgctg ggcagcgact ccgaagggtg taactgtctg gcctatgatg aagccatcat120
ggctcagcag gaccgaattc agcaagagat tgctgtgcag aaccctctgg tgtcagagcg180
gctggagctc tcggtcctat acaaggagta tgctgaagat gacaacatct atcaacagaa240
gatcaaggac ctccacaaaa agtactcgta catccgcaag accaggcctg acggcaactg300
tttctatcgg gctttcggat tctccactt ggaggcactg ctggatgaca gcaaggagtt360
gcagcgggtt aaggctgtgt ctgccaaag caaggaagac ctggtgtccc agggcttcac420
tgaattcaca attgaggatt tccacaacac gttcatggac ctgattgagc aggtggagaa480
gcagacctct gtgcggcgacc tgctggcctc cttcaatgac cagagcacct ccgactacct540
tgtggtctac ctgcggctgc tcacctcggg ctacctgcag cgcgagagca agttcttcca600
gcacttcata gaggggtggac ggactgtcaa ggagttctgc cagcaggagg tggagcccat660
gtgcaaggag agcgaccaca tccacatcat tgcgctggcc caggccctca gcgtgtccat720
ccaggtggag tacatggacc gcggcgaggg cggcaccacc aatccgcaca tcttccctga780
gggcttccga gcccaagggtc ttacctgtt ttaaccggct tggggcaatt taggtattgc840
ttttacaaa taggggtttg gtt

```

863

(2) INFORMATION ON SEQ ID NO. 95:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1015 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 95:

```

aattcggaac gagggcgccct gcaagccatg atgacccacc tgcattgtgaa gtctacagaa 60
cccaaagctg cccctcagcc cctgaatctg gtatcaagtg tcacctctc caagtccgca 120
tcggaggctt ctccacagag cttacctcat actccaacga cccaaccgc cccctgact 180
cccgtcaccc aaggccctc tgtcatcaca accaccagca tgcacacggt gggacccatc 240
cgcaggcggt actcagacaa atacaacgtg cccatttcgt cagcagatat tgcgcagaa 300
caagaatttt ataagaacgc agaagttaga ccaccattta catatgcata ttaattagg 360
caggccattc tcgaatctcc agaaaagcag ctaacactaa atgagatcta taactgggtc 420
acacgaatgt ttgcttactt ccgacgcaac gcggccacgt ggaagaatgc agtgctcat 480
aatcttagtc ttcacaagtg ttttgtgcga gtagaaaacg ttaaaggggc agtatggaca 540
gtggatgaag tagaattcca aaaacgaagg ccacaaaaga tcagtggtaa cccttccctt 600
attaaaaaca tgcagagcag ccacgcctac tgcacacctc tcaatgcagc ttacaggct 660
tcaatggctg agaatagtat acctctatac actaccgctt ccattgggaaa tcccactctg 720
ggcaacttag ccagcgcaat acgggaagag ctgaacgggg caatggagca taccaacagc 780
aacgagagtg acagcagtc ccagcagatc cctatgcaag ccgtgcatcc tgtacacgtc 840
aaagaagagc cctcgatcc agaggaagct gaagggcccc tgccttagt gacaacagcc 900
aaccacagtc cagattttga ccatgacaga gattacgaag atgaaccagt aaacgaggac 960
atggagtgc tatcggggcg ggccaacccc gagaatgaag attggaaaaa aaaaa 1015

```

(2) INFORMATION ON SEQ ID NO. 96:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 2532 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 96:

gctcgatgtg	caagtgaagg	atgattccag	ggccctgact	ttaggagcac	tgacgctgcc	60
tctggcccg	ctgctgactg	ccccagaact	catcctggac	cagtgggtcc	agctcagcag	120
ctctgggtcca	aactccagac	tctatatgaa	actagtcag	aggatcctgt	acttggattc	180
atcagaaata	tgcttcccca	cgggtgcctg	ttgtcctgg	gcttgggacg	tggacagtga	240
gaatccccag	agaggcagca	gtgtggatgc	cccacctcga	ccctgtcaca	cgactcctga	300
tagccagttt	gggactgagc	atgtgcttcg	gatccatgta	ttagaggccc	aggacctgat	360
tgccaaagac	cgtttcttgg	ggggactgg	gaagggcaag	tcagacccct	atgtcaaact	420
aaagtgtgga	ggacgaagct	tccggagcca	tggtgttcgg	gaagatctca	atccccgctg	480
gaatgaggtt	tttgaggtga	tcgtcacatc	agttccaggc	caagagctag	aggttgaagt	540
ctttgacaag	gacttggaca	aggatgattt	tctgggcagg	tgtaaagtgc	gtctcaccac	600
agtcttaaac	agtggcttcc	ttgatgagtg	gctgaccctg	gaggatgtcc	catctggccg	660
cctgcacttg	cgcttgagc	gtctcaccac	ccgtccact	gctgctgagt	tagaggaggt	720
gctgcaggtg	aatagtttga	tccagactca	gaagagtgcg	gagctggctg	cgccctgct	780
atccatctat	atggagcggg	cagaggacct	cccgtgcga	aaaggcacca	agcacctcag	840
cccttatgct	actctcactg	tgggagatag	ttctcataaa	accaagacta	tttcgcaaac	900
ttcagccct	gtctgggatg	agagtgcctc	ctttctcatc	aggaaaccac	acactgagag	960
cctagagttg	caggttcggg	gtgagggcac	tggcgtgctg	ggctcattat	ccctgcccct	1020
ctcagagctc	ctcgtggctg	accagctctg	cttggaccgc	tggtttacac	tcagcagtgg	1080
tcaggggcag	gtgctactga	gagcacagct	agggatcctg	gtgtcccagc	actcgggagt	1140
ggaagctcat	agccacagct	acagccacag	ctcctcatcg	ctgagtgaag	aaccagagct	1200
ctcgggggga	ccccctcaca	tcacctcctc	agccccagag	ctccggcagc	gcctaacaca	1260
tggtgacagt	ccccttgagg	ctccagccgg	gcctctgggc	caggtgaaac	tgactctgtg	1320
gtactacagt	gaagaacgaa	agctggtcag	cattgttcat	ggttgccggt	cccttcgaca	1380
gaatggacgt	gatcctcctg	atccctatgt	gtcactgttg	ctactgccag	acaagaaccg	1440
aggcaccaag	aggaggacct	cacagaagaa	gaggaccctg	agtcctgaat	ttaatgaacg	1500
gtttgagtgg	gaactcccc	tggatgaggc	ccagagacga	aagctggatg	tctctgtcaa	1560
gtctaattcc	tccttcatgt	caagagagcg	tgactgctgg	ggaaggtgca	gctggacct	1620
gctgagacag	acctttccca	gggtgtagcc	cggtggtatg	acctgatgga	caacaaggac	1680
aagggcagct	cctaggagct	ggcgagtccc	agcctgactg	ctctgtcttc	ctgccttcgt	1740
ctcgtccat	caccgcctca	atgtgatgag	cctaaagcta	gggtccaagg	gcagagcctg	1800
tgcccttcag	ccctttcacc	taacaggccc	atattcgggc	ctttgcctga	ccaaagagaa	1860
gaaccgtatg	ttccctttac	tgcacggcct	ttatccttct	gggcccctgg	ggcggggacc	1920
tgagctggct	gtttcctgct	ttgcctgcac	attgttctcc	cttctcccca	actcctcagg	1980
gccttctgta	tctgtgcctg	gccagtggca	gcactagcag	tggtattagc	ttatgcaaaa	2040
tacagctttg	gaaggatctt	tttttcttta	actagatgg	caccttcttc	cctaccacac	2100
atgggtggga	aggtggacag	gctaacctct	ccagctgtga	gcctcttaga	ctactgcatg	2160
tagcaaatgt	tcagcagctc	aggccccat	gtccagttct	gtccccactg	tcctcaaccc	2220
tgctcctgaaa	attctactgc	tttgatggct	ggggccagtc	tcttgtcact	ttggaaactg	2280
aggacgcgtg	gattctactc	aagcctccaa	gtagtggcat	atcagtcttg	gagctcctag	2340
ctggtgatac	ggagagggct	ttggaggact	tgggacagca	gggcccaattt	ttttgcccaa	2400
gtgcctaggc	tgctaactca	ctgactagaa	cttaactctg	tactttacag	ttttgcacca	2460
actctgccaa	gccactggat	cttacattaa	acatcatact	caaaaaaaaa	aaaaataaaa	2520
ataaaaaaaaa	aa					2532

(2) INFORMATION ON SEQ ID NO. 98:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 776 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 98:

```

tttttttttt tttttttttt tttttttttt ttttgagaca aagtctcact gtgtcaccca 60
gactggaatg cagtgcacaca atctcggtct actgaaacct ctgccttcca gggtcaagct120
attctcatgc ctgagcctct caagtagctg ggactacaga tgtgggccac catgtctggc180
taattttttt ttttttttgt agagacaggg tttcgccatg ttgacgagac tgggtctcgaa240
ctcctggcct caagtgatct gccgcctcag cttctcaaag tactgggatt atataggcat300
gagccactga gcctggccct gaagcgtttt tctcaaaggc cctcagttag ataaattaga360
tttggcatct cctgtcctgg gccagggatc tctctacaag agcccctgcc cctctgttgg420
aggcacagtt ttagaataag gaggaggagg gagaagagaa aatgtaaagg agggagatct480
ttcccaggcc gcaccatttc tgtcactcac atggacccaa gataaaagaa tggccaaacc540
ctcacaaccc ctgatgtttg aagagttcca agttgaaggg aaacaaagaa gtgtttgatg600
gtgccagaga ggggctgctc tccagaaagc taaaatttaa tttctttttt cctctgagtt660
ctgtacttca accagcctac aagctggcac ttgctaacaa atcagaaata tgacaattaa720
tgattaaaga ctgtgattgc caccaaaaaa aaaaaaaca gccaggaaaa aaaggg 776

```

(2) INFORMATION ON SEQ ID NO. 99:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 629 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

(A) ORGANISM: HUMAN

(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 99:

```

cggctcgact tccgttactt gctgcggagg accgtgggca gccagggtcg gtgaaggatc 60
ccaaaatggc tgggcgaaaa cttgctctaa aaaccattga ctgggtagct tttgcagaga120
tcatacccca gaaccaaaag gccattgcta gttccctgaa atcctggaat gagaccctca180
cctccaggtt ggctgcttta cctgagaatc caccagctat cgactgggct tactacaagg240
ccaatgtggc caaggctggc ttggtggatg actttgagaa gaagtttaat gcgctgaagg300
ttcccggtgc agaggataaa tatactgccc aggtggatgc cgaagaaaaa gaagatgtga360
aatcttgtgc tgagtgggtg tctctctcaa aggccaggat tgtagaatat gagaaagaga420
tggagaagat gaagaactta attccatttg atcagatgac cattgaggac ttgaatgaag480
ctttcccaga aaccaaatga gacaagaaaa agtatcccta ttggcctcac caaccaattg540
agaatttata aaattgagtc caggaggaag ctctggccct tgtattacac attctggaca600
ttaaaaataa taattataca aaaaaaaaaa
629

```

(2) INFORMATION ON SEQ ID NO. 100:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 757 base pairs

(B) TYPE: Nucleic acid

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual
ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

(A) ORGANISM: HUMAN

(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 100:

```

ggcgggggagc aggggggacac caggggtgaat caggaagacc cgaggggtgg cccccaccct 60
ttctccaccc acgcgggcagg ttccagggtgc cctgggtgga gtcagtcctc atcgtagtca120
gcaacaacat tgacgaggag gcgctggccc gactggccca ggagggcagt gaggtgaatg180
tcattggcat tggcaccagt gtggtcacct gcccccaaca gccttccttg ggtggcgtct240
ataagctggt ggccgtgggg ggccagccac gaatgaagct gaccgaggac cccgagaagc300
agacgttgcc tgggagcaag gctgctttcc ggctcctggg ctctgacggg tctccactca360
tggacatgct gcagtttagca gaagagccag tgccacaggc tgggcaggag ctgaggggtgt420
ggcctccagg ggcccaggag ccctgcaccg tgaggccagc ccagggtggag ccactactgc480
ggctctgctt ccagcaggga cagctgtgtg agccgctccc atccctggca gagtctagag540
ccttgggccc gctgtccctg agccgactca gccctgagca caggcggctg cggagccctg600
cacagtacca ggtggtgctg tccgagaggc tgcaggccct ggtgaacagt ctgtgtgcgg660
ggcagtcctc ctgagactcg gagcggggct gactggaaac aacacgaatc actcactttt720
ccccacagga agaggagggtg agggaagagg gggggcg 757

```

(2) INFORMATION ON SEQ ID NO. 101:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1262 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 101:

```

aatttgttga agagtgttcc tccctcatcc tctgcaaaca ttccataggc gataggaaga 60
actatgcctc tgccaagctt tctgagttgc tgccagaaga agttgaagca gaagtgaag 120
cagctgcaga gatataaatg ggaacagagg ttccagaaga agatatttgc aatattctgc 180
atctttgcac ccaggtgatt gaaatctctg aatatcgaac ccagctctat gaatatctac 240
aaaatcgaat gatggccatt gcacccaatg ttacagtcac ggttggggaa ttagttggag 300
cacggcttat tgctcatgca ggttctcttt taaatttggc caagcatgca gcttctaccg 360
ttcagattct tggagctgaa aaggcacttt tcagagccct caaatctaga cgggataccc 420
ctaagtatgg tctcatttat catgcttcac tcgtgggcca gacaagtccc aaacacaaaag 480
gaaagatttc tcgaatgctg gcagccaaaa ccgttttggc tatccgttat gatgcttttg 540
gtgaggattc aagttctgca atgggagttg agaacagagc caaattagag gccaggttga 600
gaacttttga agacagaggg ataagaaaaa taagtgggaa aggaaaagca ttagcaaaaa 660
cagaaaaata tgaacacaaa agtgaagtga agacttacga tccttctggg gactccacac 720
ttccaacctg ttctaaaaaa cgcaaaatag aacaggtaga taaagaggat gaaattactg 780
aaaagaaaagc caaaaaagcc aagattaaag ttaaagttga agaagaggaa gaagaaaaag 840
tggcagaaga agaagaaaca tctgtgaaga agaagaagaa aaggggtaaa aagaaacaca 900
ttaaggaaga accactttct gaggaagaac catgtaccag cacagcaatt gctagtccag 960
agaaaaagaa gaaaaagaaa aaaaagagag agaacgagga ttaacagaaa ggaattacga 1020
ttatatcacc cggacacaca tcatgcttaa gattcaactg ggagcatacc agggatgctc 1080
tctaacgtaa tcaaggggag gttcagtaag acaaagtgat ttatcatcta taacttcaa 1140
cctatttgtc ttgacatcaa ctctgttaac cttatgtcat catttcttag agtctttgat 1200
atacaataaa aattttcttt gtatttttaa acaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1262
aa

```

(2) INFORMATION ON SEQ ID NO. 102:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1281 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 102:

```

ggcggaagta gccgcaggca tggcgggcggc tatgccgctg ttgctctgct cgtcctggtg 60
ctcctggggc ccggcgggctg gtgccttgca gaacccccac gcgacagcct gcgggaggaa 120
cttgtcatca ccccgctgcc ttccggggac gtagccgcca cattccagtt ccgcacgcgc 180
tgggattcgg agcttcagcg ggaaggagtg tccattaca ggctctttcc caaagccctg 240
gggcagctga tctccaagta ttctctacgg gagctgcacc tgtcattcac acaaggcttt 300
tgaggagacc gatactgggg gccacccttc ctgcaggccc catcagggtgc agagctgtgg 360
gtctgggttc aagacactgt cactgatgtg gataaatctt ggaaggagct cagtaatgtc 420
ctctcaggga tcttctgcgc ctctctcaac ttcctcgact ccaccaacac agtcaactccc 480
actgcctcct tcaaaccctt gggctctggc aatgacactg accactactt tctgcgctat 540
gctgtgctgc cgcgggaggt ggtctgcacc gaaaacctca cccctggaa gaagctcttg 600
ccctgtagtt ccaaggcagg cctctctgtg ctgctgaagg cagatcgctt gttccacacc 660
agctaccact ccaggcaggt gcatatccgc cctgtttgca gaaatgcacg ctgtactagc 720
atctcctggg agctgaggca gaccctgtca gttgtatttg atgccttcat cacggggcag 780
ggaaagaaaag actggtccct ctcccgatg ttctcccgaa cctcacgga gccctgcccc 840
ctggcttcag agagccgagt ctatgtggac atcaccacct acaaccagga caacgagaca 900
ttagaggtgc accaccccc gaccactaca tatcaggacg tcatcctagg cactcggaag 960
acctatgcca tctatgactt gcttgacacc gccatgatca acaactctcg aaacctcaac1020
atccagctca agtggaagag acccccagag aatgaggccc cccagtgcc cttcctgcat1080
gcccagcggt acgtgagtgg ctatgggctg cagaaggggg agctgagcac actgctgtac1140
aacacccacc cataccgggc ctcccggtg ctgctgctgg acaccgtacc ctggatatctg1200
cggctgttac atccactacc agcctgccca ggaccggctg caaccccacc tctggagat1260
gctgattcag ctgccggcca a

```

(2) INFORMATION ON SEQ ID NO. 103:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 716 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 103:

```

gggccccaga aagagaccaa tgtgttgtgc gacgggtggg tggcagtggc agtggcagat 60
ggtaccaggc gccccagaac tctaaggggc ctcaagtagt ttaaaacctc ggaggctgcc120
tgacttgggg ccaagggttt ctatgctcag gcctgacccc tcatggatta gtttctgctg180
gaaaaacttt ttctgccctc ggccagggtct ctatctcctt ctgccttaac atattttgga240
aggttggttc ccagcagaga cggggccatg ggctcacact ctgacctctc ccacggcatt300
agccctgtct cagcctctgg gctgttacgc aagttaattc ctgcacaaga ctcaaacag360
ggctgtggag gaagcaagg agcccttttt atgcctctgt agtaggactg agagaggccc420
tctggccagc gtgagcctgc tggttcttcc cggactgtac caggccttga ggcggggtat480
ggaaacgccc cactctgggg cctggcttgg ggaaggggag gcggcagggg ttctttgggc540
ttctcgaggg tataatctga gctctctggg gaacgtgtgt ccattttagt gcagtagtcc600
gacacgtcgg gggactcaac tttaactcgg gacaatctgt gtgtggtctg tttttagtaa660
attcatccac acaagagagt ggaggcatga acaggggtgg ccttcctcgg atctca 716

```

(2) INFORMATION ON SEQ ID NO. 104:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1160 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 104:

```

tttgttgttg gagaaaggag agaaaggaaa gcgcgagggg ccgcccgcac caccagcgca 60
gagtcctgga gctgtgagga gattcggggc gtcaccctgc ctcccctgcg tcccgcacc 120
ggccgcttct gtccctcgga ccattccaac aatctcgtaa aacatgggtg attactatga 180
agttctaggc gtgcagagac atgcctcacc cgaggatatt aaaaaggcat atcgaaact 240
ggcactgaag tggcatccag ataaaaatcc tgagaataaa gaagaagcag agagaaaatt 300
caagcaagta gcggaggcat atgaagtgtc gtcggatgct aagaaacggg acatctatga 360
caaatatggc aaagaaggat taaatgggtg aggaggagg ggaagtcatt ttgacagtcc 420
atttgaattt ggcttcacat tccgtaaccc agatgatgtc ttcagggaat tttttggtgg 480
aagggaacca ttttcatttg acttctttga agaccctttt gaggacttct ttgggaatcg 540
aaggggtccc cgaggaagca gaagccgagg gacggggtcg tttttctctg cgttcagtgg 600
atttccgtct tttggaagtg gattttcttc ttttgataca ggatttactt catttgggtc 660
actaggtcac gggggcctca cttcattctc ttccacgtca tttggtggtg gtggcatggg 720
caacttcaaa tcgatatcaa cttcaactaa aatggttaat ggcagaaaaa tcactacaaa 780
gagaattgtc gagaacggtc aagaaagagt agaagtgtga gaagatggcc agttaaagt 840
cttaacaata aatggtgtgg ccgacgacga tgccctcgct gaggagcgca tgcggagagg 900
ccagaacgcc ctgccagccc agcctgccgg cctccgcccg ccgaagccgc cccggcctgc 960
ctcgctgctg agacacgcgc ctactgtct ctctgaggag gagggcgagc aggaccgacc1020
tggggcaccc gggccctggg accccctcgg cgtccgcagc aggattgaaa gaaggtggca1080
agaggaagaa gcagaagcag agagaggagt ttgaaggagg aaggaagttg gaccaaaggc1140
attgattaga ccggtttttt

```

1160

(2) INFORMATION ON SEQ ID NO. 105:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1040 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 105:

```

agcatccgct tccggttccc agactgaatt gtcagtgagc ggagtctgag gtcgctgtgg 60
actgcccact gggccttgcc cgagatggac agccggattc cttatgatga ctaccggtg 120
gttttcttgc ctgcctatga gaatcctcca gcatggattc ctccatcatga gaggggtacac 180
caccgaggact acaacaatga gttgaccagc tttctgcccc gaaccatcac actgaagaag 240
cctcctggag ctgagttggg atttaacatc cgaggaggaa aggcctccca gctaggcatc 300
ttcatctcca aggtgattcc tgactctgat gcacatagag caggactgca ggaaggggac 360
caagttctag ctgtgaatga tgtggatttc caagatattg agcacagcaa ggctgttgag 420
atcctgaaga cagctcgtga aatcagcatg cgtgtgcgct tctttcccta caattatcat 480
cgccaaaaag agaggactgt gcactagaaa gttgcagccc acagcccttc atgtggactc 540
tgtcatgaca tgctaactag acttcagggg agccacttct gttttcagcc cctccctgga 600
atagtgaatt gggaggatgg ggagacagct aaccaactgc attaccctga ccattattgca 660
cttttagttc cctagttttc taggtgagct tcattccctg aaaggaggat gatgatattc 720
aggcataacc tagcctgtga ggaacctagt taggaaagac aactgacatt tattgaatat 780
catgcactag tcccttacat atgtcatatt ttaattatag aaatcagtag caaaaagaat 840
cttgggggatt ttccatctga cttccctggc catcttatcc catccttgca ctaccagaag 900
attcatacac ttttgagact ccagtgaagc gctgttttca ccccttcctc ctccatagcct 960
ctctcccaaa aagtaaaaca caatgctgaa gaaaaaaaaa aaaaaaaaaa aaaaaggggg 1020
gggccggccg gtgggtggtc

```

(2) INFORMATION ON SEQ ID NO. 106:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1336 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 106:

```

cgagggacag aacctggtgc aggaggagtt ggcgggccgc gggaccacgc ccccgcccat 60
ccgcaacggc ctggacaaag ccgcgaggtc cgttcgagc gagctgagca ggccctgcgc 120
cgggttcagcc agggcccccac acccgctgcc gctgtcccg agggcacggc agccgagggc 180
gctcccaggc aggaaaactg tggtgcccag caggtcccg caggccgggc actagcacc 240
ctcccagcag ccccgctgcg acctgcgggc ccctgacgga tgaggacgtg gtcaggctgc 300
ggccctgtga gaagaagcgg ctggacatcc gtggcaaact ttacctggcc cccctcacca 360
cgtgtgggaa cctgcccttc cgacggatct gcaagcgctt cggggcggat gtgacatgtg 420
gagagatggc cgtctgcacc aacctgctgc agggccagat gtccgagtgg gccctactca 480
aacgccacca gtgtgaggac atctttggcg tccagctgga gggcgccctc cccgacacca 540
tgaccaagtg tgccgagctg ctgagccgca ccgtggaggt ggactttgtg gacatcaacg 600
tcggctgccc catcgacctc gtgtacaaga aggggtgggg ctgtgccctc atgaatcgct 660
ccaccaagtt ccagcagatc gtccgtggca tgaaccaggt gctggatgtg ccgctgactg 720
tgaagatccg cacaggcgtc caggagcgtg tgaacctggc gcaccgctg ctgcccgagc 780
tgccggactg gggcgtggca ctgctcacgg aaatggggac atcttgcct ttgaggatgc 840
caaccgcgcc atgcagactg gtgtcaccgg gatcatgatt gcccggtggc ccctgctcaa 900
gccgtggctc ttcacggaga tcaaggagca gcggcactgg gacatctcgt cgtccgagcg 960
cctggacatc ctgcccggact tcaccaacta cggcctggag cactggggct cggacacgca 1020
gggcgtggag aagacccggc gctttctgct cgagtggctg tccttcctgt gccggtacga 1080
tcccgtgggg ctgctggagc ggctcccaca gaggatcaac gagcgccgc cctactacct 1140
gggccgcgac tacctggaga cgtgatggc cagccagaag gcagccgact ggatccgcat 1200
cagcgagatg ctcttgggc cagtgcctcc cacctgcct tcttgccgaa gcacaaggcc 1260
aacgcgtaca agtagcctca ggctttccca ggggcacctt ggggcgagga gagtacaata 1320
aatatttattc ttttaa

```

1336

(2) INFORMATION ON SEQ ID NO. 107:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 812 base pairs
- (B) TYPE: Nucleic acid

(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual
ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:
(A) ORGANISM: HUMAN
(C) ORGAN:

(vii) OTHER ORIGIN:
(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 107:

```

ggcagcccaa tgtctcctgc acgtgcaatg caaacgctct ttgttcaga gcatggagat 60
cacggagctg gagtttggtc agatcatcat catcgtggtg gtcacgtgcc tgctgagcca120
ctacaagctg tctgcacggt cttcatcag cgggcacagc caggggcgga ggagagaaga180
tgccctgtcc tcagaaggat gcctgtggcc tcggagacac agtgtcaggc aacggaatcc240
cagagccgca gtcttacgcc ccgcctcggc ccaccgaccg cctggccgtg cgcccttcgc300
ccagcggagc gttttccacc gttgccagcc caatgtctcc tgcacgtgca actgcaaacg360
ctctttgttc cagagcatgg agatcacgga gctggagttt gttcagatca tcatcatcgt420
ggtggtcacg tgccctgctga gccactacaa gctgtctgca cggtccttca tcagccggca480
cagccagggg cggaggagag aagatgccct gtcctcagaa ggatgcctgt ggccctcgga540
gagcacagtg tcaggcaacg gaatcccaga gccgcaggtc tacgccccgc ctcgccccac600
cgaccgctg gccgtgccgc ctttcgccc gcgggagcgc ttccaccgct tccagccccac660
ctatccgtac ctgcagcacg agatcgacct gccgcccacc atctcgctgt cagacgggga720
ggagcccca ccctaccagg gccctggac cttcaaggtt cgggaccccg aggaggagtt780
ggaaattgaa cggggattgg gtgcggagac cc                               812

```

(2) INFORMATION ON SEQ ID NO. 108:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 2681 base pairs
(B) TYPE: Nucleic acid
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual
ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:
(A) ORGANISM: HUMAN
(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 108:

```

gatgcttggt atcatcatca tgatgacgct gtgtgaccag gtggatattt atgagtgcct 60
cccatccaag cgcaagactg acgtgtgcta ctactaccag aagttcttcg atagtgcctg 120
cacgatgggt gcctaccacc cgctgctcta tgagaagaat ttgggtgaagc atctcaacca 180
gggcacagat gaggacatct acctgcttgg aaaagccaca ctgcctggct tccggaccat 240
tcaactgctaa gcacaggctc ctcaactcttc tccatcaggc attaaatgaa tggctctctg 300

gccaccccag cctgggaaga acatttttct gaacaattcc agcctgctcc ttttactcta 360
ggggcctctg tcagcaagac catggggact tcaagagcct gtggtcagga aatcagggtcc 420
agccttcctt gtagccagac agtttatgag cccagagcct cctgccacac acatgcacac 480
atatctagca ttctttccag acagcatcct ccccgcttcc caccttggtg gatgcaagggt 540
ctatctctcc catcagggtc gccaaagctg ggctttgttt tcccagcag aatgatgcca 600
ttctcacaaa ccaatgctct atattgcttg aagtctgcat ctaaatattg atttcacgtt 660
ttaaagaaat tctcttaaat tacaattgtg cccaatgcag ggtggctctg gggggcaagt 720
aggtggtaca ggggattgga aacatgctcc gcgcctccag agaaaagttg ctcccagggt 780
ccatgccccct ggaacgtgtt cctatcactc tggctggttg ggctggtcct tagactgggt 840
gcttatgatt aaagggtctt ggtagccca ctttccctct ccatgtggag atggaaggta 900
gagaaggata cagtgtctat cctcaagttg ctacggttca gtgagagagg cagacatctg 960
aacaggcagg taggattcag tgtgtcagtg gcaactggga tttggagaga gatgggcttg 1020
ctctctctgt gcacccagga gggccacgca cttaaaactg tgtttgtgga tcagagaagg 1080
ctttatagca cagggggcat tcagatgagt cttagaggaa gagaagaaac atggcaagca 1140
gattacatct gagccgtttg aattgtgttt ttctttcttc ccatgtttat tttctaagat 1200
ctacctgaac ttagagactc aagatatttt tttaggaaac ctctaccca tgtctgaggt 1260
agcaagtgca gcctcacgac agataccagg caatccagag ccacaaaacg tgattcctcc 1320
aggctctgcc tggcctgacc ctgtcctgtc agctgggttt acataccagt cccattcttc 1380
cttttcaata aataccccc aatcttcttc taaccaccat taaagcattt tttgctttaa 1440
aagcatcctg accccaattt ctttgagctc acgggccttt tgctgaagggt ctctcagggt 1500
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gcttggttta tgttctgatt tgacacactg attttaatct tcgaatcatg aactgagtg 2520
cagaggagggt ggcattccga cagcaggaca tacatgttgg tgtgaagact gggacgacac 2580
tggtagaagt ctagttttta attattatta atataaagga tcaaattaat ttaaatatga 2640
atccgaagtc cacagaactt taagtgtgtg gccggccatg t 2681

```

(2) INFORMATION ON SEQ ID NO. 109:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1407 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 109:

cttgggacgg	aagcctagct	gggtgggggg	cgccgggctg	gagccttcgc	aggggagcgg	60
gctcagtcac	caccctgcgc	cccagagtga	ctcagccccc	acgtcccccac	ccatccccgg	120
ggagccaggg	ccgcagaggg	aggtagataa	gtgggggtgg	agcctgggtc	ggccagagag	180
ttcaggccac	cccggccgga	cgccctgccac	ttgctgtcac	tgtgccgctg	tcattggcacg	240
ctccgggagt	gccacgccac	ctgcccgggc	tccgggagcc	cctccacgga	gcccacccca	300
gaggctggta	caggatgtca	gtgggcccct	gagggagctg	cgccctcggc	tctgccacct	360
gcgaaaggga	cctcagggct	atgggttcaa	cctgcatagt	gacaagtccc	ggcccggcca	420
gtacatccgc	tctgtggacc	cgggctcacc	tgccgcccgc	tctggcctcc	gcgcccagga	480
ccgggtcatt	gaggtgaacg	ggcagaatgt	ggagggactg	cgccatgctg	aggtgggtgg	540
cagcatcaag	gcacgggagg	acgaggcccc	gctgctggtc	gtggaccccc	agacagatga	600
acacttcaag	cggttccggg	tcacacccac	cgaggagcac	gtggaaggte	ctctgccgtc	660
acccgtcacc	aatggaacca	gccctgcccc	gctcaatggg	ggctctgcgt	gctcgtcccc	720
aagtgaacctg	cctggttccg	acaaggacac	tgaggatggc	agtgcctgga	agcaagatcc	780
cttccaggag	agcggcctcc	acctgagccc	cacggcggcc	gaggccaagg	agaaggctcg	840
agccatgcga	gtcaacaagc	gcgcgccaca	gatggactgg	aacaggaagc	gtgaaatctt	900
cagcaacttc	tgagcccctt	cctgcctgtc	tccggaccct	gggacccctc	ccgcacggac	960
cttgggcctc	agcctgcccc	gagctcccc	agcctcagtg	gactggaggg	tggtcctgcc	1020
attgccca	aatcagcccc	agccccgggtg	agcccccatc	ctgcccctgc	ccaccaggta	1080
ctgggggcct	gtggcagcaa	gataggggga	gagagaccca	gagatgtgag	agagagtcag	1140
agacagagac	agagagagag	agagagagac	acagagagag	acagagagag	agcgagcgag	1200
cgcgcggcag	ccgcggggcg	agggcctttg	ctgctctgcc	ggggcctgct	gactgaaagg	1260
aatttgtgtt	tttgcttttt	ttccaaaaag	atctccagct	ccacacatgt	ttccacttaa	1320
taccagagac	cccccccgtc	aaagccccc	tccccggccc	cttgggacgc	gctctaaata	1380
attgcaataa	aacaaacctt	tctctgc				1407

(2) INFORMATION ON SEQ ID NO. 110:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1376 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 110:

```

cgaagaagcc ccgccccgct ccgcttagac aatgccccgg agccgccaga ccgtcgcgcc 60
cctgccccat cgtagtatat gagctcgctt acacaaggac ccccgctaaa agccagagct 120
cccagtcctc gaggtctgaa gacggggact cccttctcca ccaactctgt cctcgggggg 180
tgggggcccca gccgagatca cagcgcgaca ggagtggggg tggccgctgg agacagggtg 240
agaaacaaga aaactaagaa atccgagcgg ttggaggggg agtctgtgtg gatgggatgg 300
ggacgcgcgg ggaggggctg ggccgctgct cccatgccct gatccgggga gtcccagaga 360
gcctggcgct gggggaaggt gcgggggctg gccttcccg ccttgatctg gccaaagctc 420
aaaggagagc cggggtgctg ggaggtaaac tgaggcaacg actggggcta cagctgctag 480
aactgccacc tgaggagtca ttgcgctgg gaccgctgct tggcgacacg gccgtgatcc 540
aaggggacac ggccctaata acgcgccctt ggagccccgc tcgtaggcca gaggtcgatg 600
gagtcgcaaa agccctgcaa gacctggggc tccgaattgt ggaaatagga gacgagaacg 660
cgacgctgga tggcactgac gttctcttca ccggccggga gttttctgta ggccctctca 720
aatggaccaa tcaccgagga gctgagatcg tggcggacac gttccgggac ttcgccgtct 780
ccactgtgcc agtctcgggt ccctcccaac tgcgcggtct ctgcggcatg gggggacctc 840
gcactgttgt ggcaggcagc agcgacgctg cccaaaaggc tgtccgggca atggcagtgc 900
tgacagatca cccatatgcc tcctgaccc tcccagatga cgcagctgct gactgtctct 960
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tgcccaacag ccaggaggca ctgcagaagc tctctgatgt caccctggta cctgtgtcct 1080
gtcagaact ggagaaggct ggcgcggggc tcagctccct ctgcttggtg ctacgcacac 1140
gccccacag ctgagggcct ggccttgggg tactgtggc caggggtagg atagtatagg 1200
aagtagaagg ggaaggaggg ttagatagag aatgctgaat aggcagtagt tgggagagag 1260
cctcaatatt gggggagggg agagtgtagg gaaaaggatc cactgggtga atcctccctc 1320
tcagaaccaa taaaatagaa ttgacctttt aaaaaaaaaa aaaaaaaaaa agttct 1376

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(2) INFORMATION ON SEQ ID NO. 111:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 854 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 111:

```

acgtatagtc gggtcgggctg gtggagtagc tcagagtagg gggagcgccg taattgacac 60
atctcttatt tgagaagtgt ctgttgccct cattaggttt aattacaaaa tttgatcacg120
atcatattgt agtctctcaa agtgctctag aaattgtcag tggtttacct gaagtggcca180
tgggtgtctg gagcaccctg aaactgtatc aaagttgtac atatttccaa acatttttaa240
aatgaaaagg cactctcgtg ttctcctcac tctgtgcact ttgctgttgg tgtgacaagg300
catttaaaga tgtttctggc attttctttt tatttgtaag gtggtggtaa ctatggttat360
tggctagaaa tcctgagttt tcaactgtat atatctatag tttgtaaaaa gaacaaaaca420
accgagacaa acccttgatg ctccctgtgc ggcgttgagg ctgtggggaa gatgcctttt480
gggagaggct gtagctcagg gcgtgcactg tgaggctgga cctgttgact ctgcaggggg540

catccattta gcttcagggtt gtcttgtttc tgtatatagt gacatagcat tctgctgcca600
tcttagctgt ggacaaaagg gggtcagctg gcatgagaat attttttttt ttaagtgcgg660
tagtttttaa actgtttggt tttaaacaaa ctatagaact cttcattgtc agcaaagcaa720
agagtcactg catcaatgaa agttcaagaa cctcctgtac ttaaacacga ttgcgaacgt780
tctgttattt tttttgtatg tttagaatgc tgaaatgttt ttgaagttaa ataaacagta840
ttacattttt aaaa

```

854

(2) INFORMATION ON SEQ ID NO. 112:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1681 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

(A) ORGANISM: HUMAN

(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 112:

```

ttcagctttt gccgaaatgg gtagtgatca cacacagtca tctgcaagca aaatctcaca 60
agatgtggac aaagaggatg agtttggtta cagctggaaa aatatcagag agcgttatgg 120
aaccctaaca ggcgagctgc atatgattga actggagaaa ggtcatagtg gtttgggcct 180
aagtcttgct gggaaacaaag accgatccag gatgagtgtc ttcatagtgg ggattgatcc 240
aaatggagct gcaggaaaag atgggtcgatt gcaaattgca gatgagcttc tagagatcaa 300
tggtcagatt ttatatggaa gaagtcacat gaatgcctca tcaatcatta aatgtgcccc 360
ttctaaagtg aaaataatth ttatcagaaa taaagatgca gtgaatcaga tggccgtatg 420
tcctggaaat gcagtagaac ctttgccttc taactcagaa aatcttcaaa ataaggagac 480
agagccaact gttactactt ctgatgcagc tgtggacctc agttcattta aaaatgtgca 540
acattctgga gcttcccaag gaggcagggg ggtttgggta ttgctatcag cgaagaagat 600
acactcagtg gagtcacatc aaagagctta acagagcatg gggtagcagc cacggatgga 660
cgactcaaag tcggagatca gatactggct gtagatgatg aaattgttgt tggttaccct 720
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gctgagaatc cagattccca ggctgttcct tcagcagctg gtgcagccag tggagaaaaa 840
aagaacagct cccagtctct gatggtccca cagtctggct ccccagaacc ggagtccatc 900
cgaaatacaa gcagatcatc aacaccagca atttttgctt ctgatcctgc aacctgcccc 960
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gccgatggaa gactgatgca gggagaccag atattaatgg tgaatgggga agacgttcgt1440
aatgccaccc aagaagcggg tgccgtttgg ataaaagtgt ttccctaggg cacagttaac1500
cttgggaagt tgggaaggat tcaaagctgg gtcccgttcc gtttcaggag gagggagggc1560

cgtttttcaa aggcagccca gggttgagtt tgaaggggca gcctctttcg tcttttttcal1620
cgtttttccc acttttttgg ggatccccgt ttacattttg agttccactt ggggaagtta1680
g

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1681

(2) INFORMATION ON SEQ ID NO. 113:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 852 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 113:

```

ggcaatttcc gttaggtgct gaaggctgtg ggcgcgggct gtccccattc ccacgtgaag 60
cgctacgcta gcatcgctcg gctggcggtt cccagctcgc cgcggagcag tcccggcagc120
agcgggggac cggaagtggc tcgcggaggc tcagaagcta gtcccggagc ccggcgtgtg180
gcgcctcgga gcacgggtgac ggcgccatgt ccctaattct ctccatctct aacgaagtgc240
cggagcacc atgtgtatcc cctgtctcta atcatgttta tgagcggcgg ctcacgcaga300
agtacattgc ggagaatggt accgacccca tcaacaacca gcctctctcc gaggagcagc360
tcacgcacat caaagttgct cacccaatcc ggcccaagcc tccctcagcc accagcatcc420
cggccattct gaaagctttg caggatgagt gggatgcagt catgctgcac agcttcactc480
tgcgccagag ctgcagacaa cccgccaaga gctgtcacac gctctgtacc agcacgatgc540
cgctgcccgt gtcattgccc gtctcaccaa ggaaactgtg aaggggatgg gcaggagggc600
ttgtgcaggg ttttgtaagc agtgatctag tttcattaaa aaaagaaaac aataaaaaag660
ccctgcacaa ggccacagc ccctctccct tcctgtcggt caatggacgt ggtggtggct720
gttccacacc cattttgttg cagttcctgt gagacaggag aggctgagcc aagggaactg780
tgaaggggat gggcaggagg gcttgtgcag ggttttgtaa gcagtgatct agtttcatta840
aaaaaagaga ac

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852

(2) INFORMATION ON SEQ ID NO. 114:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1739 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

(A) ORGANISM: HUMAN

(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 114:

```

gaagcccggg gcctggcgac gcgcacgcgg agcggagcgg cagcgcacgc gggcgatcgc 60
ttcacggatg cggacgacgt agccatcctt acctacgtga aggaaaatgc ccgctcgccc 120
agctccgtca ccggtaacgc cttgtggaaa gcgatggaga agagctcgct cacgcagcac 180
tcgtggcagt ccctgaagga ccgctacctc aagcacctgc ggggccagga gcataagtac 240
ctgctggggg acgcgcgggt gagccccctc tcccagaagc tcaagcggaa ggcggaggag 300
gaccgcggag ccgcggatag cggggaacca cagaataaga gaactccaga tttgcctgaa 360
gaagagtatg tgaaggaaga aatccaggag aatgaagaag cagtcaaaaa gatgcttgtg 420
gaagccaccc gggagtttga ggaggttgtg gtggatgaga gccctcctga ttttgaaata 480
catataacta tgttgtatga tgatccaccc acacctgagg aagactcaga aacacagcct 540
gatgaggagg aagaagaaga agaagaaaaa gtttctcaac cagaggtggg agctgccatt 600
aagatcattc ggcagttaat ggagaagttt aacttggatc tatcaacagt tacacaggcc 660
ttcctaaaaa atagtgggtga gctggaggct acttccgcct tcttagcgtc tggtcagaga 720
gctgatggat atcccatttg gtcccgacaa gatgacatag atttgcaaaa agatgatgag 780
gataccagag aggcatttgt caaaaaattt ggtgctcaga atgtagctcg gaggattgaa 840
tttcgaaaaga aataattggc aagataatga gaaaagaaaa aagtcatggg aggtgagggtg 900
gttaaaaaaa attgtgacca atgaacttta gagagttctt gcattggaac tggcacttat 960
tttctgacca tcgctgctgt tgctctgtga gtcctagatt tttgtagcca agcagagttg 1020
tagaggggga taaaagaaa agaaattgga tgtatttaca gctgtccttg aacaagtatc 1080
aatgtgttta tgaaaggaag atctaaatca gacaggagtt ggtctacata gtagtaatcc 1140
attgttgga tggaaccctt gctatagtag tgacaaagtg aaaggaaatt taggaggcat 1200
aggccatttc aggcagcata agtaatctcc tgtcctttgg cagaagctcc tttagattgg 1260
gatagattcc aaataaagaa tctagaaata ggagaagatt taattatgag gccttgaacal 1320
cggattatcc ccaaaccctt gtcatttccc ccagtgagct ctgatttcta gactgctttg 1380
aaaatgctgt attcattttg ctaacttagt atttggttac cctgctcttt ggctgttctt 1440
tttttgga ccttctcagt caagtctgcc ggatgtcttt ctttacctac ccctcagttt 1500
tccttaaaac gcgcacacaa ctctagagag tgttaagaat aatgttactt ggttaatgtg 1560
ttattttatt agtattgttt gtgctaagca ttgtgttaga tttaaaaaat tagtggattg 1620
actccacttt gttgtgttgt tttcattgtt gaaaataaat ataactttgt attcgaaaaa 1680
aaaaaaaaaa aaaaaaaaaa gaggagaaaa agaggggaaa gggggaagag gagcaaga 1739

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(2) INFORMATION ON SEQ ID NO. 115:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 805 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 115:

```

ataggcgcac cccaaggtca gggtcacctc gagcctccag acaactgcgt caccttgacg 60
accaactgaa aaaaccggaa gggatggaag cagcggatca tctcgcgata tctggagcgt120
ctgcgcctgc cttcctgacc tgggacttgt ttccagctct cgcgagactt tcaggggtcg180
gagcgcgggg gcccgccgag aggaaagctg gaggcgcggg tggggaacat gtctgagtcg240
gagctcggca ggaagtggga ccggtgtctg gcggatgcgg tcgtgaagat agaatcctgg300
taattgatgt ccacccgaga aatccctgca gatgttccag cctctgtcta gtccagatag360
ccacaggaag ggtactggtt ttggattagg aattgttttc tcacttacct tctttaaaag420
aagaatgtgg ccattagcct tcggttcttg catgggatta ggaatggctt attccaactg480
tcagcatgat ttccaggctc catatcttct acatggaaaa tatgtcaaag agcaggagca540
gtgacttcac ctgagaacat ccagcggga ggacaagaga aatcatgttt attcctcagg600
aatactgaag tgccctggag taagctgcca ttcttctgta acaatgttat cagtaatgct660
ttaaactcca gcacctggtt atgcatttga aaccaagtct gtttcttgtt ttgtattttc720
tctctggaag ttgtaaggag gtggtcttaa ataaattaaa caaaaatagg aagtccaaaa780
aaaaaaaaa aaaaaaaaaa aaaaaa                                     805

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(2) INFORMATION ON SEQ ID NO. 116:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1483 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

(A) ORGANISM: HUMAN

(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 116:

tgaaaaagac	ccaacgccaa	cacctgggtgc	cttttgacgc	cagcgccac	ccatccgtgc	60
ccggaccctt	gggaatgcc	gcggctccag	aggaaaaagc	ccagggacgg	ggcctccgtt	120
gcgggggggc	ggctgcttct	tgggaacttt	gtcgtttccg	gcgctggctg	gctggctggc	180
tgtaaagcac	tgaagcccc	cgcccgccaa	cccctgaaag	cagaacctgg	cctccctggc	240
cacagcagcc	ttaccacccg	ctctacgtgt	cccgggcact	tcccgcagcc	ttcccgctcc	300
tttctcatcg	gccttgtagt	tgtacagtgc	tgttggtttg	aaaagggtgat	gtgtggggag	360
tgcggtcat	cactgagtag	agaggtagaa	tttctattta	accagacctg	tagtagtatt	420
accaatccag	ttcaattaa	gtgatttttt	gtaattatta	ttattttggt	gggacaatct	480
ttaattttct	aaagatagca	ctaaccatcag	ctcattagcc	acctgtgcct	gtccccgcct	540
tggcccggct	ggatgaagcg	gcttccccgc	agggccccca	cttcccagtg	gctgcttctt	600
ggggacccag	ggcacccccg	caccttcagg	cacgctcctc	agctggtcac	ctcccggtt	660
tgccgttcag	atggggctcc	tgaggctcag	gagtgaagat	gccacagagc	cgggctcccc	720
taggctgcgt	cgggcatgct	tggaagctgg	cctgccagga	ccttccaccc	tggggcctgt	780
gtcagccgcc	ggccctccgc	accctggaag	cacacggcct	ctgggaagga	cagccctgac	840
cttcggtttt	ccgagcacgg	tgtttcccaa	gaattctggg	ctggcggcct	ggtggcagtg	900
ctggagatga	ccccgagccc	ctccccgtgg	ggcaccacag	agggccctgc	cggaatgtgc	960
agcctgtggg	tagtcggctg	gtgtccctgt	cgtggagctg	gggtgcgtga	tctggtgctc	1020
gtccacgcag	gtgtgtgggt	taaacatgta	tgtgctgtac	agagagacgc	gtgtggagag	1080
agccgcacac	cagcgccacc	caggaaaggc	ggagcggtta	ccagtgtttt	gtgtttattt	1140
ttaatcaaga	cgtttccctt	gttttccctat	aaatttgctt	cgtgtaagca	agtacataag	1200
gacctcctt	tggtgaaatc	cgggttcgaa	tgaatatctc	aaggcaggag	atgcattctat	1260
tttaagatgc	tttgagcag	acagcttttag	ccgttcccaa	tccttagcaa	tgccttagct	1320
gggacgcata	gctaatactt	tagagaggat	gacagatcca	taaagagagt	aaagataaga	1380
gaaaatgtct	aaagcatctg	gaaaggtaaa	aaaaaaaaaa	tctatttttg	gacaaatgta	1440
attttatccc	ccatgggatg	cttgggtatg	gcggggggga	ggc		1483

(2) INFORMATION ON SEQ ID NO. 117:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1347 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 117:

tgagggtcttc	catgactgca	agtgttatat	tggactggat	ggtcatgaag	tccctttcat	60
agccagagat	tttgtgtggc	tgctaaaatg	cttacatctc	tggctatgaa	agggacttca	120
tgaccatcca	gtccaatata	acacttgcag	acagagaaac	tgagggtcttc	catgacttgc	180
ctagtctccc	agctagtttg	aggcaaaact	ggattcccac	tctggtattc	tttcttccct	240
ttacatcatt	ttccctcctt	tataatgtcc	tgagagacca	gaactcacac	cagaatcgat	300
tattcctcag	gtgaagcata	gactctttca	tggtagacag	atttcacgac	tcagagatag	360
aaatctcttg	ctatcatcag	gtcacgggca	gctcctgtgg	agtcctgccc	aacttatgtg	420
gcttccataa	aatggcaaca	gtccaggctc	cttgccctaat	tttagagcat	taactcccta	480
attgccagta	agcaaggagg	tggatctctg	caaacctaca	ctgtctatga	cagctctagt	540
tgtacttggg	gtgactaaat	acctcaaagg	caacctgctt	ctgcagggtt	tgaagtgtca	600
gcttcataag	acactgaggt	ttagaattgt	ttgattctag	accataactg	aagggcataa	660
atggaaaacag	gatatgaagg	gaaacaagta	gcatcatgga	gctgaaaagt	ggtgcatcac	720
ccaatggcta	gcacaaacaa	ggatcacact	gtccattctc	ttgtctgcta	aattaagcat	780
tttcttgcct	cctttgcttc	atctttttcac	aacagctgga	tagagggatc	agaaatgact	840
gtgtcatggg	gctcattcac	tgcaaaactcc	cagttgcaag	ctccttggct	cccccgagg	900
gagcaagaat	ctcatagttc	agagacacag	agggcctttt	agccctaagt	accttttggg	960
tgggactgca	actcatgact	atcctgatat	tggaagaaa	gactttgtta	atcttctccc	1020
ccatagctct	gctgcgtagg	tctacatctt	actcagaatc	actacacatt	ccttttagtct	1080
tcctccaagc	tccagagcca	ttggtacaaa	tgctttattg	aaactaaata	cataatacac	1140
acaatgagat	gaagacaata	tagaagtccg	catagtcatc	ataatcccgt	tccttggccg	1200
gttgaggcag	ctcagtggct	gagcccagtc	aagccaaccc	gcagcttcac	tcacgacttc	1260
aagatttgat	gctaattctt	ttggatttct	acagttatta	aataagtgtc	tgagtggaaa	1320
aaaaaaaaaa	aaaaaaaaaa	aaaaaat				1347

(2) INFORMATION ON SEQ ID NO. 118:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1683 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 118:

```

aattcggcac gatgggggga atctccgacc cgcacaccct acacatctgg aagaccaaca 60
gccttcctct ccggttcttg gtgaacatcc tgaagaaccc ccagtttgtc ttgacatcg 120
acaagacaga ccacatcgac gcctgccttt cagtcacgcg gcaggccttc atcgacgcct 180
gctccatctc tgacctgcag ctgggcaagg attcgccaac caacaagctc ctctacgcca 240
aggagattcc tgagtaccgg aagatcgtgc agcgctacta caagcagatc caggacatga 300
cgccgctcag cgagcaagag atgaatgccc atctggccga ggagtcgagg aaataccaga 360
atgagttcaa caccaatgtg gccatggcag agatttataa gtacgccaag aggtatcggc 420
cgcagatcat ggccgcgctg gaggccaacc ccacggcccg gaggacacaa ctgcagcaca 480
agtttgagca ggtggtggct ttgatggagg acaacatcta cgagtgtctac agtgaggcct 540
gagacacatg gagagttggt caggctgtctg ctgggagaaa tggacgcca ctgggcctca 600
acttgatctt ctaccccgct cctgtgactc agactgggaa atactgagca gagacggctg 660
gggcgggggc aggaggagg gctgctctct gagacagggg cgcccccgcc ttgacccttg 720
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tggtcaggct cccccatctg ccagcacagg cctgcaactg gccacccac ttgctccaca 840
acgtccagtt ggtcctgctg ccaagagccc cgtgcatcca ggccgccaag cacaactgg 900
gggagaggag gccgccagcc cggaggctgc agcccagaaa ctctacctca tccacactgg 960
tgcagggagc cctccttgaa ctgacctttg attggtttct gcttcaacta ccaaatgtt1020
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gatttttgtt gcttgggagg ctgttggtag agtgggcagt gcccgcgcca tggggtgctc1140
tgtgggcttc tccaggagca gggagggtgg aggggagga tggggggcac aggagctggg1200
agccccgtct ccaggaaaag gagaggggtt aagatgcacc gaggtgtag ctgggctact1260
tgatcttgct gaaagtgtt ctaaagatag caccactttt ttttttaaag cttttatata1320
ttaaaaaacg tatcatgcac caactgtgaa tagctgccgc ttgcgcagag gaccggggga1380
ggggtcccga gaggtcctcc atgcaacact ggaaatgact gttccagaga gcgggcagac1440
ctggcagagc gccctggcg cctgagacta ccaccactc cgttcctgcc agaaacgacc1500
ctctgtggcc gatgggccat gcgggcccct cgcagccaac tcagccagtg ttgggactgg1560
ctcagagccc atgggggctg gaggggggca gctgggactc tggaatcttc ttataataa1620
aagccttacg gacaaaccta aaaaaaaaaa aacaagacaa gagagggaaa gggaaagaag1680
ggg

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1683

(2) INFORMATION ON SEQ ID NO. 119:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1355 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 119:

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acaagcatgg aagctttact gtttcggctc ttcaaacttc cagcaactac actgcggtgc 60
atcggacttc gacgcccgt ggtgacgcac acgctgcgcc ggaagtgtga acacaaagcc 120
tccaggcttt gtcattggcg ctgctgctgc acgctggaac catgtgtggg tcggcaccga 180
gactgggata ttgaaagggg taaatcttca gcgaaaacag gcggcgaaact tcacggccgg 240
aggacagccg cggcgcgagg aggcagtga cgcctgtgt tggggcaccg gcggcgagac 300
ccagatgctg gtgggctgcg cggacaggac ggtgaagcac ttcagcaccg aggatggcat 360
attccagggt cagagacact gcccgggcgg ggagggcatg ttccgtggcc tcgcccaggc 420
cgacggcacc ctcatcacat gtgtggattc tgggattctc agagtctggc atgacaagga 480
caaggacaca tcctctgacc cactcctgga actgagagtg ggccctgggg tgtgtaggat 540
gcgccaagac ccagcacacc cccatgtggt tgccacaggt gggaaagaga atgctttgaa 600
gatatgggac ctgcagggt ctgaggaacc tgtgttcagg gccagaacg tcggaatga 660
ctggctggac ttgcgggttc ccactctgga ccaggacata cagtttctcc caggatcaca 720
gaagcttgtc acctgcacag ggtaccacca ggtccgtgtt tatgatccag catcccccca 780
gcgcccggca gtccatagaga ccacctatgg agagtacca ctaacagcca tgaccctcac 840
tccgggaggg aactcagtga ttgtgggaaa cactcatggg cagctggcag aaattgacct 900
tcggcaaggg cgtctactgg gctgtctgaa ggggctggca ggcagtgtgc gtgggttgca 960
gtgccaccct tcaaagcctc tactagcctc ctgtggcttg gacagagtct tgaggataca 1020
caggatccag aatccacggg gtctggagca taaggtttat ctcaagtctc aattgaactg 1080
cctcctcttg tcaggcaggg acaactggga ggatgagccc caagagcctc aagaacccaal 1140
caaggtgccc ctagaagaca cagagacaga tgaactttgg gcaccccttg aggcagctgc 1200
caagcgggaag ctctcgggtt tggagcagcc ccaaggagct ctccaaacga gacggagaaa 1260
gaagaagcgg cctgggtcca ccagcccctg acgcccctgt gccactttg taaataaaact 1320
gctgaacacc caaaaaaaaaa gaaaaaaaaa agggg

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1355

(2) INFORMATION ON SEQ ID NO. 120:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1816 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 120:

```

ggtcagagag attctgaaaa gtaatccaaa gtgttcgcta gctaaacatg gtgcaggctc 60
gttgtaaccac tgcaaccgac tgacgttact gtagttccta gaatgctgtg agggcggggg 120
gttcagatca acataaagcc taacttgetg gagttgtagt ctcaaggctt tctctcttgc 180
ttaactaaaa cctaaggacc actgtttttg gtagcaatta tatggttact atccactgca 240
gtcctcagtt gttggggtaa atcccacatg gcagagtaag gcacccacaca gaaattaact 300
tgagagagcct gagaaattcc cagtggcctt ggcataagctg tctagaacac catctctagg 360
aaaatttaat tctgtccctg gccagctatt gttcttccac ttcgttttct gctgtcccaa 420
ggccagatga gtggaatcac catctgactg ttgtcaataa aatgtatctg gcgtgaacag 480
caggataacc catgttctcc acataaggat aaccttaactg gaaaccttcc tgetgacaac 540
catgcagagg aattttttcca cttaagtcag agccttctct cccatctgga attcacagct 600
gttccctggc agcacacagg aggtatttaa ttccatcata attcagtcct ttcttattct 720
cacctctttg gggaagttac gatttttttt ttccatcata attcagtcct ttcttattct 720
acagtgtgca ctttatgcct ctgccttttt gataatagtt gttcagtga ggaagtcagc 780
tgccagaata ttaagaaggg tctcccttta tgtcagtaca actgttaggg cggccttccc 840
atctacttta ggtttcaaga ggattcaccg gaagcacatg ccccggtcta gtcccatttg 900
aaacagttct gctttactga gaccctaggc cggctctcct gctgacccta gcgtgctgc 960
ctaggtgcca tttcctttcc tctcagtc aatacaggct gcacattttg tcaactaatg 1020
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aagacactga gaagccagtg atctgcaagc atttgctctt gtttccacat cacctctggg 1140
atatttcagc tgttgtttcc aaatggcaaa tcatcaacta aaagcacttg tttcaagttt 1200
tgttctgcac tcccagact gaagttgtag attgagctga ataaccatgg gaagtgacca 1260
agcaaagaca ctcgattgga gtcagttgaa tatttgtacc ctcaagtggag ccttctggtt 1320
cttttcttcc acttctgcag aatttcctct agcaaatact tctttctcct tgcttccctc 1380
caccatgata tttgaataag agatggccag aggataacac ttgtctctta aaaactaagc 1440
taaaaagaac ctagaacctt caattgagca gttgtgaaaa ttgctaattg tgccaaggcc 1500
aagcaaagag tttcagaaaa tgactgagaa ggagcgataa cccccagaat gcaaaatcag 1560
gggcatcatt atccggtgct tgaacaagga gctccgctct acaactgggt ttttaggac 1620
ttgtgaggaa cacagcaacg gaaatccatc caciaaggat gcagtgcctt aacttgta 1680
gcgcctgaat agtcatgtga taatttactg aagaaatcta gtgtacttta aatttttttc 1740
ataaaagttt acattgtatt gtaggttaac attaaatgtt ttatagcaaa aacttcaaaa 1800
aaaaaaaaaa aaaaaa

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1816

(2) INFORMATION ON SEQ ID NO. 123:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 740 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 123:

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tttagaattc agcatagggt gaggtcagaa agcaattcag gcatgagcca ccgtgcgccg 60
cttcacaccc atttctttaa aaaggatccc gtagcaggca gaaaagcccc ttccatcctg120
ctcctctgat actgtgcccc cttggagata tttccgtcct ccaccacagt gtctgtggct180
ggaactgccc agcctgctcc tggccccctg gaagcctccc cacagctggg aatctggact240
taaggattgc tgggccaccg cctctctgcc taccaccatt ccatatttaa gtggagcccc300
tacgtagaaa ggccccgggg ctttatttta gtctcctttt cagggatgtc gtgggcgggg360
gaggggggtt ttggtgctac agccctctcc ccacccttaa agggacgccg acgctgtttg420
ctgccttcac cacatattag tgcttgaccc tggcagggga ccccatggaa aagatgggga480
agagcaaaat acatggagac gacgcaccct ccaggatgct cgctgggatt cccacgcccc540
ccactgtccc ccaccctatg gctgggaggg gcctctgaac ggaacagtgt cccacagag600
cgaataaagc caaggcttct tccccaaaaa aaaaaaaaaa aaaaaaaaaa aagataggtt660
agttaaggcg gccgaaagtt tttttccctt tagtaagggt tagtttttag tttgggggtt720
gccttcgttt ttaagaacgt

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740

(2) INFORMATION ON SEQ ID NO. 124:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1493 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

(A) ORGANISM: HUMAN

(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 124:

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aacacctgcc ctggttcagc gcttttaggga gggcggtca ggcgccccgg agcaggcaga 60
gtgctgtggag ctgctgctgg ccctgggcga gcctgctggag gagctgtgcg aggagttcct 120
ggcgcacgcc cgcggccggc tggagaagga gctgagaaac ctggaggccg agctggggcc 180
ctcacctccg gctcccagc tgttagagtt caccgacat ggaggcagt gcttcgtggg 240
cggcctctgc caggtggcgg cggcctacca ggagctgttt gcggcccagg gccagcagg 300
tgccgagaag ctggcggcct tcgcccggca gctgggcagc cgctattttg cgctggtgga 360
gcgcggtgtg gcgcaggagc aggggtgttg tgacaactca ctgctggtgc gggcgctgga 420
ccgcttccac cggcgcttgc gggctcccgg ggccctgctg gccgctgccg ggctcgaga 480
cgctgccacg gagatcgtgg aacgagtggc ccgcgagcgc ctgggccacc acctgcaggg 540
tctccggggc gccttcctgg gctgcctgac agacgtccgc caggcgctgg cagcacctcg 600
cgtggctggg aaggagggcc ctggcctggc cgagttgttg gccaatgtgg ccagctccat 660
cctgagccac attaaggcct ctctggcagc agtgcacctt ttcaccgcca aagaggtgtc 720
cttctccaac aagccctact tccggggtga gttctgcagt cagggtgtcc gtgagggcct 780
catcgtgggc ttcgtccact ctatgtgcca gacggctcag agcttctgcg acagccctgg 840
ggagaagggg ggtgccacac cacctgccct gctcctgctg ctctcccgcc tctgcctgga 900
ctacgagacg gccaccatct cctacatcct cactctcact gatgaacagt ttctggtgca 960
ggatcagttc ccagtgcgc ccgtgagcac gctgtgtgca gaggccaggg aaacggcgcg 1020
gcggtgtgtg acccactacg tgaagggtga gggcctggtc atatcacaga tgctgcgcaa 1080
gagcgtggag actcgcgact ggctcagcac tctggagccc cggaatgtgc gggccgtcat 1140
gaagcgggtg gtggaggata ccaccggcat cgacgtgcag gtggggctcc tgtacgaaga 1200
gggtgttcgc aaggcccaga gcagcgactc cagcaagagg actttctccg tgtacagcag 1260
ctctcggcag cagggccgct acgccccag ctatacccc agtgccccga tggacaccaal 1320
cctcttgagc aatatccaga agctattctc tgaacgtatt gatgtgttca gccctgtgga 1380
gttcaacaag gtgtcggtgc tgaccggcat catcaagatc agcctgaaga cgcttgctgg 1440
gagtgtgtgc gggctgcgaa cctttttggc cctttgcggg cttcaacaag ggg 1493

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(2) INFORMATION ON SEQ ID NO. 125:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 250 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 125:

```
ccagactgaa ttgtcagtga gcgcatctga gggcgggtgtg gagtggccag tggggccttgg 60
ccgagatgga caaccggatt ctttatgatg actagccggt ggtttcttgc ctgcctatga120
gaatcctcca gcatggaatc ctcctcatga gaggggtacac agccggacta caacgatgag180
ttgacccagt tttggcccga accatcacac tgaagaagcc tcctggagtc attgggatta240
agatcgaggg                                     250
```

(2) INFORMATION ON SEQ ID NO. 126:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1202 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 126:

```

tcgggggggag cggcgcgggcg gcgcgggagtg tggttctaaa gagtggtgag tcagaagaga 60
cgtcaggcag caagcgactt gggccatggc ctctgacctt gacttctcac ctccggaggt 120
gcccagagccc actttccttg agaacctgct acggtacgga ctcttccttg gagccatctt 180
ccagctcatc tgtgtgctgg ccatcatcgt acccattccc aagtcccacg aggcggaggc 240
tgaaccgtct gagcccagaa gtgctgaggt gacgaggaag cccaaggctg ctgttccttc 300
tgtgaacaag agggccaaga aagagactaa gaagaagcgg tagaagagga ggcctgagga 360
gctgggaggg caggagagag gtcttgggga cagccctcct gggaatctac attgtgttcc 420
cccgcattcc aggtcagagg tctgaggagg ctgtgacgcc ctatgaccgc agagatctag 480
acagtcgtaa cagtcctccag gctccagctg ggcaatccac cacttcctct tccttctgct 540
tctgtgacgg tttagagtca agggggctga aacacactgt gagcatagac tgtattaggt 600
ttgttcagaa gccgggtcag ctccacagag cacattttct tgcttagtca tgtgtccctc 660
cttgagttgc cccctccttg tgggtttaca ctacattttg gagtcattgt ctaatgctga 720
caagcacacc ctctcccatt atttgtgcac tacagatctc ctgctgatca gtcacctttg 780
ttgctgctgt gtagacagag ccaggcctca cctgtttggt taggccaaga tgccatggac 840
atgcagcggt agtgatccca ctagctgtga cagccaggcc cagaaaatgc ctggcgtgag 900
agccagcaga cagccaggcc aggggtaggc agtgctgct tctgctccat caggtgcagg 960
ggatttggct gaaggcgtgc atatttcttg ggcacaaact tcctgagcct ctgaaatggg 1020
aggctcgtca atttcagacc aacctctttt caaccatca tagcacgttc aaggtgtgcc 1080
ttttacttct acctgtacat ccccatccc ttcaattctt tcattccctg accagtga 1140
gggttccttg gggaagtatg gtgaataaac tgacatgcat gcttcagaaa aaaaaaaaaa 1200
aa

```

(2) INFORMATION ON SEQ ID NO. 127:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1014 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 127:

```

cccttttttt ttctttttga gatgggggga aagtcctagc aaaaggcagg agttagcatt 60
ttccttttaac aagactttct aatgctaaac aaagaccaac ttctttttaa aggggttggt 120
ttggttggtg gtgaaaaata ctgtactgta atgatctgct tggtttttaa gcaaaagaga 180
tcctgacatg tgaaaccaat acaccaaaat gccaaagtcca caaatgaaca aaacaagtgc 240
ttaaaaaaaaa aattcttctg ctcttatatt ttggaggaa gctgctgatt ttggctgtca 300
gatttcactt agaaatggtc actttctgag atgctttttc ctcacagaat ctgtagataa 360
actcattaaa agattgtccc atttcaaaat caccccaag tctagcagca ctgttttttt 420
tttttttagt tttgtttta aaattacaaa ccaagtaaga agtccaacat cctcttccat 480
gaacagcttt gtgacagagc tcctgagtgt gtgcagcccc cactgtgctc tgaatacagt 540
ctctgcagct ccagtgtgtc ctcttttcag gaaggaaagc atattcaata cattcactat 600
ctgtaccccc tggaacttgc acatgctgac gagctattat aagccaactc atccccagct 660
ctcttccggg actggtcacc ccttgtaaaa ccattctgta taagttctct ttgaaatttc 720
tgatcttgag cagcatattc agaaagttca gattccaccg cgggaggagg aatgtttgga 780
ataaatttag aaaatagagt tggagccatc tgaaccactc ctggtctgag ggtatacagg 840
cctttcacaa tatttgccat agttgaaggt gtgacctgaa atggtgttga ctgggcttct 900
aaaagtaaag gcattaggcc gtaaatgtgc ttttctgcaa catgttccgt aaacagcttt 960
ataagggcac cttaagccc gggtaagctg gtccatggga acctatcggt ttg 1014

```

(2) INFORMATION ON SEQ ID NO. 128:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1171 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 128:

```

caccaaatta atcagggtta cagacagggt cccaccggtt ttcacattct tgttagtgat 60
cagatgggttc agaattttca agatgagagt tgttttttat tctccacagt aaaagctgaa 120
agtagtgatg gcatccacat aattttgaaa tgatgtctta tatagactga actgtattca 180
gtaccaaata gtcacgctta aaagtgtgtg aagactgaat ccaagaagtc ttgggattgg 240
athttaccat atgaaatgtt tcatattgaa aacacaagat gacctttcta atgagctgta 300
tgagagggtg atctcctcac tgtcactgcc atagccaagc atcctcatga gagtgagcac 360
atcggcacag catgcatcca gctctggagg ccacggtgca ggcatagctg cctgctgctc 420
tggcagaggc cagtaaatac agttcctaga agcagccttt gctgtctttt tacactgtat 480
gcggttttga aatgaatgta gaaacttact gtgggcattt acctttctgt gccagtttgg 540
cttttattgc ctgaacctta tgctgacctg gagaggagat gggggacagt gctgttgtgg 600
ggccagcagt gaatctgtat gcggagagtt gtgttgtgct gatgtggccg ttggtggtca 660
ggtaagaggc tcggcacctt cttggaagaa atcatgtctg aggggtgtacg tttgatatga 720
tcatgccaga ttggagaaga tccaagccag gaagatgggc ttgaagcaaa ctgcattatc 780
aggagtacct tgggtgagagg atcagtgtaa atcctaatag gtacaaagac ttttgtgttt 840
tggtttgttc acagatttat tgaaaaactt ttttgcttct gcttccattt ttagcatttt 900
agtttctggt tttcattttt ggagattcct tgctttttaa actcgtgggt tttctctcat 960
tttcttccct ctctccctcc atctctgacc acccccaccc taacccccca cccccaccat 1020
cctattaaac attttttaaag ccctacccca gacattggga aatagggtga cccaagtagg 1080
gggggaggaa agtattgatt tgtttgata ggcttgtgga ttaggggtgt aaggggttct 1140
tggattatgg aacaaggtgg aatttttttt g                                     1171

```

(2) INFORMATION ON SEQ ID NO. 129:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 353 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 129:

```

ggccgggacg cagggcaaaag cgagccatgg ctgtctacgt cgggatgctg cgcctgggga 60
ggctgtgcgc cgggagctcg ggggtgctgg gggcccgggc cgccctctct cggagtgggc 120
aggaagccag gttgcagggt gtccgcttcc tcagttccag agagggtgat cgcattgtct 180
ccacgccccat cggaggcctc agctacgttc aggggtgcac caaaaagcat cttaacagca 240
agactgtggg ccagtgcctg gagaccacag cacagagggt ccagaacga gaggccttgg 300
tcgtcctcca tgaagacgtc aggttgacct ttgcccaact caaggaggag tgg                                     353

```

(2) INFORMATION ON SEQ ID NO. 130:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 205 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 130:

```

cggctgagcg gccccgcagc caacccccga ggagcggccg gctggcgtgc cgctggcgcc 60
caggagttgg ggatgtccta caaacccatg cgcccctggc tgcccagcag cacccttg120
tctgccaggc accccttggg gcccggggca ccccggttcc ctgacaggga ggcgtgcgcg180
tgcgccgtgc ggggctgcag tgtcc                                     205

```

(2) INFORMATION ON SEQ ID NO. 131:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 211 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 131:

```

aatcacctt acaaccatt tctcagaaca tgtttctatt gttaaacaac acacaactat 60
tttatttatg tgttttattt atgcctgata accaatatca ataactgaaa cacagcagtt120
tagtaataat ttaatacaca ccataacctg cctattgaga atggcattat atttgttttc180
attgtagtgg ctccatccaa aataaaatga t                               211

```

(2) INFORMATION ON SEQ ID NO. 132:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 867 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 132:

```

gtcttcccaa gatggagatg ctaacgaaac tgagaagggg gcgtatgttt gacgaaggtt 60
tgtgcaagtc aggcccttct ggaacacagc agggcctaca acgagggggcc tttgcatggt120
gctgtgagga tgggggtggt gggaagaatt ggccacgtta gagaccccat gccacccac180
catggtgagt gctctgtgcc tctgtctcac ctgtggtgag tgggcgagct gggcgagctg240
ggcgagctgg gctggggaga gcctgtgagg accgagagga gaaatgagaa gaaggaacaa300
aaatattatt tctatgtaat ttatatTTTA cttatgccaa attatttatg ataatttgcc360
attgctatac tgtaccagtg tcaaattgctg cagcctgcca agctgtgatt ttgtgaggct420
tgtccctatg taggatgcac cgcaggcccc tggccactga aagagtgtgc agtggactgt480
gggtctccca tatgcggtgc cgcccaaagg tggctttgcc tcaagcaacc taccctgatg540
ttttactcat tggaaatgtt ttccccgatt gtggatgact tcttttctga tggagagagt600
ccaggaggga tggaaaacgc ctggatttaa gctcagcatc cccacatgg gcttttcgat660
catcttcagg cctgaagctg cacgacctga agttcgctg catttatcag ccctctttgt720
gctgctcctt gccaccttg ggttcctgct ggggaccatg tgtggttgtg gcatgtgtga780
gcagaaggga ggatgaggaa aaaagagaag gaaacccccg ttagtgacaa gtgttttttt840
gagttgccag gttttgccat cattaaa                               867

```

(2) INFORMATION ON SEQ ID NO. 133:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 257 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual
ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 133:

```
aattcagact cccattctta acttggcatt tttgtagctt acaggaacca gcttggtgta 60
ccttctctta tgagatgcag ctggaaagcc atttatgcaa gaggtgggtt cacttttgtc120
gctcctccat tcattgacct ttcagccttt aaaaaattag aatgtgaaaa ttagtagcaal80
agagtgcaga gatattagct taagggataa ataaatgaaa gtagcaagta gtcattatt240
tatgaagagt aataatt                                     257
```

(2) INFORMATION ON SEQ ID NO. 134:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 204 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual
ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 134:

```

gactggctca tggcctctgt aaatggctgc tggcgggact gtctgcctag cgggtgccct 60
tggaacctag cccttggtgg gttttgagga aatgattcct gaatgaggag tcgattgccg120
tgtgaagggc tgggtggcacg gcacccgcgt gagctacgcg tgccctcagt gcgcttctgg180
attgactggc catgggtgct caca                                     204

```

(2) INFORMATION ON SEQ ID NO. 135:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 245 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 135:

```

ttgcaccatg gtaaactgtg ataatacagt atcatttttg agcagttttt taaatgtaaa 60
tctgtatctt actcagagtg tgtgtctgaa gttattaagg acatttccca acgttactgg120
cccatttccc tttgtaatca gaggaattct gtttcaagat tattgttggtg tgtgatctgt180
ggctcttgat cagaatgaag ttaaattggc acaggaggat taagctatga ggttggcatt240
tttca                                     245

```

(2) INFORMATION ON SEQ ID NO. 136:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1637 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

(A) ORGANISM: HUMAN

(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 136:

```

ggggagggac gagtatggaa ccctgaaggt agcaagtcca ggcactggcc tgaccatccg 60
gctccctggg caccaagtcc caggcaggag cagctgtttt ccatcccttc ccagacaagc 120
tctattttta tcacaatgac ctttagagag gtctcccagg ccagctcaag gtgtcccact 180
atccctctg gaggaagag gcaggaaaat tctccccggg tccctgtcat gctactttct 240
ccatcccagt tcagactgtc caggacatct tatctgcagc cataagagaa ttataaggca 300
gtgatttccc ttaggcccag gacttgggcc tccagctcat ctgttccttc tgggcccatt 360
catggcaggt tctgggctca aagctgaact ggggagagaa gagatacaga gctaccatgt 420
gactttacct gattgccctc agtttggggg tgcttattgg gaaagagaga gacaaagagt 480
tacttgttac gggaaatatg aaaagcatgg ccaggatgca tagaggagat tctagcaggg 540
gacaggattg gctcagatga cccctgaggg ctcttcaggt cttgaaatgc attccatgat 600
attaggaagt cgggggtggg tgggtggtgg gggctagttg gggttgaatt taggggccga 660
tgagcttggg tacgtgagca ggggtgtaag ttagggctct cctgtatttc tggteccctt 720
ggaaatgtcc cttctctcag tgtcagacct cagtcccagt gtccatateg tgcccagaaa 780
agtagacatt atcctgcccc atcccttccc cagtgcactc tgacctagct agtgcctggg 840
gcccagtgac ctgggggagc ctgggtgcag gccctcactg gttccctaaa ccttgggtggc 900
tgtgattcac gtccccagg gggactcagg gaggaatatg gctgagttct gtagtttcca 960
gagttggctg gtagagcctt ctagaggttc agaattattg cttcaggatc agctgggggt 1020
atggaattgg ctgaggatca aacgtatgta ggtgaaagga taccaggatg ttgctaaagg 1080
tgagggacag tttgggtttg ggacttacca ggggtgatgt agatctggaa cccccaagtg 1140
aggctggagg gagttaaggt cagtatggaa gatagggttg ggacagggtg ctttggaatg 1200
aaagagtgac cttagagggc tccttggggc tcagggaatgc tcctgctgct gtgaagatga 1260
gaaggtgctc ttactcagtt aatgatgagt gactatattt accaaagccc ctacctgctg 1320
ctgggtccct tgtagcacag gagactgggg ctaaggggccc ctcccaggga agggacacca 1380
tcaggcctct ggctgaggca gtagcataga ggatccattt ctacctgcat ttcccagagg 1440
actagcagga ggcagcctt agaaaccggc agttcccaag ccagcgctg gctgttctct 1500
cattgtcact gccctctccc caacctctcc tctaaccac tagagattgc ctgtgtcctg 1560
cctcttgctt cttgtagaat gcagctctgg ccctcaataa atgcttctg cattcatctg 1620
caaaaaaaaa aatttttc

```

1637

(2) INFORMATION ON SEQ ID NO. 137:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 260 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 137:

```

aaaagcatag ctcactctgt aataggctat ttccatgatt tcaagtgggt ttatgaagaa 60
acagaaagca gtgatgatgt tgaagtgtctg actctcaaga aattcaaagg agacctggcc120
tacagacgac aagagtatca ggtagaattc aacatatggt gcttgaagtg ggctcttggt180
ttatcagtta tggcatatgt aaataacagt gtaccaagtt agtgtggtgt ttatgaagat240
gagtttaatc ttttgtgatg
                                         260

```

(2) INFORMATION ON SEQ ID NO. 138:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 957 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 138:

```

ggggaatttg tctttgaaa gcttgtgcaa cctctacaac tggcgataca agaatctagg 60
aaacttacc catgtgcagc tcttgccaga gttagtaga gcaaagtctg gcttactgta120
tgacttccag ctcatatg ttgaagatt tcaaggagt ggagaatctg aacctaattcc180
ttacttctat cagaatcttg gagaggcaga atatgtagta gcacttttta tgtacatgtg240
tttacttggt taccctgctg acaaaatcag tattctaaca acatataatg gccaaaagca300
tcttattcgc gacatcatca atagacgatg tggaacaat ccattgattg gaagaccaa360
caagggtgaca actgttgata gatttcaagg tcaacagaat gactatattc ttctttctct420
ggtacgaacc agggcagtgg gccatctgag ggatgtccgt cgcttggtag tggccatgtc480
tagagccaga cttggacttt atatcttcgc cagagtatcc ctcttccaaa actgttttga540
actgactcca gctttcagtc agctcacagc tcgccccctt catttgcata taattccaac600
agaacctttc ccaactacta gaaagaatgg agagagacca tctcatgaag tacaataat660
aaaaaatatg ccccgatgg caaactttgt atacaacatg tacatgcatt tgatacagac720
tacacatcat tatcatcaga ctttattaca actaccacct gctatggtag aagagggtga780
ggaagttcaa aatcaagaaa cagagttgga aacagaagaa gaggccatga ctgttcaagc840
tgacatcata cccagtcaa cagacaccag ctgccgtcaa gaaactccag cctttgagcg900
tgagagccgc cccggtgggg aaggggcaat tgcgttgggg gggcttgggt gtttttt 957

```

(2) INFORMATION ON SEQ ID NO. 139:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 760 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 139:

```

gtggaataca atagatatta atttgtggtt ggtttttctg cctgctttta atgaaatgta 60
ttatgtttct gggttccttt tttagctgta aaaatacttc gtcactaaag catgaaattt120
aatcagcagt tgttcttcaa gttcctgaaa gctataaaaag tttctcatga cttgagtgg180
tttttccttg cccaccagag gagaaagccc ttgtagaatt ctgcagtgtt acaagtgttc240
cctacaaaaa ctgaaaccat cagctcctct ttaacaagtt ggctttttta aagcacgtaa300
ttacaattta atggtattct gttaaagtgg gctctaggca taatttaaat tctttttaat360
gactatattt cttcaaaaact ttgaaagaaa aatgtgttct ttttgctgca tcctttgtaa420
gaagactgcc aacagaggaa aaaggacttt acaaattaag accatcttgg tttcatttcc480
acaaagatga gaacaaatca tgggtgttag aaaggatcct tagaagaaca caagaatttg540
aaagcccttg gtggttatca ctactatatt tcatatttcc acagaagtga cttagccaag600
ctctgcattt tgagcctgct gactttcatt taaaaggaat gaaaggctga aaatccaggc660
tgctgtgtct gtagataaag gtcaaaccat gtttgagttc ttcactgttg tgtccaccta720
aataaaactg agtaagtaat gaaaaaaaaa aaaaaaaaaa 760

```

(2) INFORMATION ON SEQ ID NO. 140:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 260 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 140:

```

aggaaccctc cggcctagaa gttcagatgt cttgccaata tatctgtgct tcacaacttg 60
cctactctct ctgacccta acattttcac atacttttcc aattctgcct gtcataaatt120
tgctgcttcc ccctaagtag aatgttgatt cctgtcaaac acacagccta gccctgattc180
ctcctcttct ctcaagcagt gatattgtca acaatgataa acaactacta tgtactgagt240
gtttttttat gtgctgctca cactttatag acatgtatag 280

```

(2) INFORMATION ON SEQ ID NO. 142:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 461 base pairs
- (B) TYPE: Nucleic acid

(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual
ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:
(A) ORGANISM: HUMAN
(C) ORGAN:

(vii) OTHER ORIGIN:
(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 142:

```
gcggccgctc gaggaagca cccgccggtt ggccgaagtc cacgaagccg ccctctgcta 60
gggaaaaccc ctggttctcc atgccacacc tctctccagg tgccctctgc ctcttcaccc120
cacaagaagc cttatcctac gtccttctct ccatctatcg gacccagtt tccatcacta180
tctccagaga ttagctatt atgcgcccgt ctacaggggg tgcccagcga tgacggtgcc240
ttcgcagtca aattactctt cgggtcccaa ggtttggtt tcacgcgctc cattgccccg300
gcgtggcagg ccattccaag cccttcggg ctggaactgg tgcggagga gcctcgggtg360
tategtacgc cctggtgttg gtgttgctc actcctctga gctcttctt ctgatcaagc420
cctgcttaaa gttaaataaa atagaatgaa tgataccccg g 461
```

(2) INFORMATION ON SEQ ID NO. 143:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 436 base pairs
(B) TYPE: Nucleic acid
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual
ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:
(A) ORGANISM: HUMAN
(C) ORGAN:

(vii) OTHER ORIGIN:
(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 143:

```

caaagatgtc atgtggccag aatcatcttt tagtctcacc actccacact gatggtcaca 60
tagaggtgtg agttgggaag ttgttaaata caagagggtt tgagcttctg gagaagaggga120
aaatgtaaaa gtattttttc cttaaagaaa gataaaaagg taagcctaaa ccttggcggc180
caccgaagtc agctgttacg catgtgtagt taaatttcac tgtaaattatt tcataaggggt240
tcttagaatg gagccagggt gacatcacag cccaactgt accaaaggaa ccatttcatt300
caaataagcc aacattttcca aagaaacacg aatgtctatg gcagagttaa cataaggtca360
gaaaatcctc tggaagaaat ttcggtatca atgtttataa tctctgcatt taggggtttg420
ccagtttggg caaaaaa                                     436

```

(2) INFORMATION ON SEQ ID NO. 144:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 287 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 144:

```

ctttaaagta gggctgtgga agggggatat agtagagggg gagagggctg ttttatacac 60
gtataaatgg tatacaccat ttatacacgg tggtcagaga agctctgac aggtgacgta120
tgtacagaaa gtcactgtgg cctgagtaga gtcaaggaga aggagcagca agagttgagc180
ttagggaggt ggagaagggg tggaatagat caagcaagac cttggccctg gtagggatct240
gggattttaa gtgagaggac aaccgttggg atgttgtgag cacagaa                287

```

(2) INFORMATION ON SEQ ID NO. 145:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 555 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

(A) ORGANISM: HUMAN

(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 145:

```

ggcgacgcct cggtactgac ctctgcagag cggggtggag cccattgacg tccagcgaac 60
gaggagcagc gatggacggt cgggtgcagc tgataaaggc cctcctggcc ttgccgatcc120
ggcctgcgac gcgtcgctgg aggaaccgga ttccctttcc cgagacgttt gacggcgata180
ccgaccgact cccggagttc atcgtgcaga cgggctccta catgttcgtg gacgagaaca240
cgttctccag cgacgccctg aaggtgacgt tcctcatcac ccgcctcaca gggcccgccc300
tgcagtgggt gatcccctac atcaagaagg agagccccct cctcaatgat taccgggggt360
ttctggccga gatgaagcga gtctttggat gggaggagga cgaggacttc taggcgggga420
gaccctcggg cctggggggc ggtgctctgg ggagggtccg ctgtgttact ggccgcccgc480
agggtcgcca ccggcgccct ccctccgcca gtccctcccc ctcgaaaccg ccgcgaagtc540
ccctgcgggtg ctggtt                                     555

```

(2) INFORMATION ON SEQ ID NO. 146:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 1790 base pairs

(B) TYPE: Nucleic acid

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

(A) ORGANISM: HUMAN

(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 146:

```

agtgagaaaag cagggactct tcggcctagg cagccgggac ccagccagcc ctgcgcctcg 60
cgccgtcgcg catgcgtcct ggtctttctc tagagttgta tatatagaac atcctggagt 120

ccaccatgaa cggacagttg gatctaagtg ggaagctaatt catcaaagct caacttgggg 180
aggatattcg gcgaattcct attcataatg aagatattac ttatgatgaa ttagtgctaa 240
tgatgcaacg agttttcaga ggaaaacttc tgagtaatga tgaagtaaca ataaagtata 300
aagatgaaga tggagatctt ataacaattt ttgatagttc tgacctttcc tttgcaattc 360
agtgcagtag gatactgaaa ctgacattat ttgttaatgg ccagccaaga ccccttgaat 420
caagtcaggt gaaatatctc cgtcgagaac tgatagaact tcgaaataaa gtgaatcgtt 480
tattggatag cttggaacca cctggagaac caggaccttc caccaatatt cctgaaaatg 540
atactgtgga tggtagggaa gaaaagtctg cttctgattc ttctggaaaa cagtctactc 600
aggttatggc agcaagtatg tctgcttttg atcctttaaa aaaccaagat gaaatcaata 660
aaaatgttat gtcagcgttt ggcttaacag atgctcaggt ttcagggccca cccagtgtc 720
ctgcagaaga tcgttcagga acaccgcaga gcattgcttc ctctcctca gcagctcacc 780
caccaggcgt tcagccacag cagccaccat atacaggagc tcagactcaa gcaggtcaga 840
ttgaagggtca gatgtaccaa cagtaccagc aacaggccgg ctatggtgca cagcagccgc 900
aggtcccacc tcagcagcct caacagtatg gtattcagta ttcagcaagc tatagtcagc 960
agactggacc tcaacaacct cagcagttcc agggatatgg ccagcaacca acttcccagg 1020
caccagctcc tgctttttct ggctcagctc aacaactgcc tgctcagccg ccacagcagt 1080
accaggcgag caattatcct gcacaaactt acactgcccc aacttctcag cctactaatt 1140
atactgtggc tcctgcctct caacctggaa tggctccaag ccaacctggg gcctatcaac 1200
caagaccagg ttttacttca cttcctggaa gtaccatgac cctcctcca agtgggccta 1260
atccttatgc gcgtaaccgt cctccctttg gtcagggcta taccacacct ggacctggtt 1320
atcgataagg aggtcctctc acaccaatta atgtagctgc tagctattgg cctcccaaaa 1380
gactccagta ctattttaat ttgtattgaa gaagttcaga aatttaaaag cagagcattt 1440
tttatgatat cattgttggt gttaattgaa agtataattt gctggaacac aaagaccaa 1500
atgaaagttt tttcctccct gcttaaaaat gtagcagctt cttagttact ttggaacact 1560
actcttacat gtataaagtg attgacttga ctttctagct tcccttgctc ggaggatatt 1620
aaaatgcttg ggtgaggtt agccatctta cttggctttt tactattaac atgatgtact 1680
aaagtagagc cctttgagaa tacaagatat tatgtataaa atgtaacact gatgataggt 1740
taataaagat gattgaatcc aaaaaaaaaa aaaaaaaaca aaaaaaaaca 1790

```

(2) INFORMATION ON SEQ ID NO. 147:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 2357 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual
ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 147:

```

ctcgagccga atcggtctga ggcagacct gcagcgggca aagagctccc gaggaagcac 60
agcttgggtc aggttcttgc ctttcttaat gtttagagaca gctaccggaa ggaggggaac 120
aaggagttct cttccgcagc ccctttcccc acgcccaccc ccagtctcca gggacccttg 180
cctgcctcct aggtctggaag ccatggtccc gaagtgtagg gcaaggggtgc ctcaggacct 240
tttgggtcttc agcctccctc agccccagg atctgggtta ggtggccgct cctccctgct 300
cctcatggga agatgtctca gagccttcca tgacctcccc tccccagccc aatgccaaagt 360
ggacttggag ctgcacaaag tcagcagggg ccactaaatc tccaagacct ggtgtgcgga 420
ggcaggagca tgtatgtctg caggtgtctg acacgcaagt gtgtgagtgt gagtgtgaga 480
gatggggcgg ggggtgtgtct gtaggtgtct ctgggcctgt gtgtgggtgg ggttatgtga 540
gggtatgaag agctgtcttc ccctgagagt ttctcagaa cccacagtga gaggggaggg 600
ctcctggggc agagaagttc cttaggtttt ctttggaaatg aaattcctcc ttcccccat 660
ctctgagtag aggaagccca ccaatctgcc ctttgcagtg tgcagggtgg aaggtaagag 720
gttgggtgtg agttggggct gccatagggt ctgcagcctg ctggggctaa gcggtggagg 780
aaggctctgt cactccaggc atatgtttcc ccactctctg ctggggctac agaatagggt 840
ggcagaagtg tcaccctgtg ggtgtctccc tcgggggctc ttccctaga cctccccctc 900
acttacataa agctcccttg aagcaagaaa gaggtccca gggctgcaaa actggaagca 960
cagcctcggg gatggggagg gaaagacggt gctatatcca gttcctgtct tctgtcatg1020
gggtggtgtg acaaccctgg cctcacttga ttcatctctg gttttcttgc caccctctgg1080
gagtcctcat cccattttca tcctgagccc aaccaggccc tgccattggc ctcttctccc1140
ttggcacact tgtaccaca ggtgaggggc aggacctgaa ggtattggcc tgttcaacaal200
tcagtcataa tgggtgtttt tgtcaactgc ttgttaattg atttggggat gtttgccccg1260
aatgagaggt tgaggaaaag actgtgggtg gggaggccct gcctgaccca tcccttttcc1320
tttctggccc cagcctaggt ggaggcaagt ggaatatctt atattgggag atttgggggc1380
tcggggaggc agagaatctc ttgggagctt tgggtggcgc tgggtgcattc tgtttcctct1440
tgatctcaaa gcacaatgtg gatttgggga ccaaaggcca gggacacatc cccttagagg1500
acctgagttt gggagagtgg tgagtggaag ggaggagcag caagaagcag cctgttttca1560
ctcagcttaa ttctccttcc cagataaggc aagccagtca tggaatcttg ctgcaggcccc1620
tccctctact cttcctgtcc taaaaatagg ggcggttttc ttacacaccc ccagagagag1680
gagggactgt cacactggtg ctgagtgacc ggggctgtgt gggcgtctgt tctttaccaal1740
aaccatccat ccctagaaga gcacagagcc ctgaggggct gggctgggct gggctgagcc1800
cctggtcttc tctacagttc acagaggtct ttcagctcat ttaatccag gaaagaggca1860
tcaaagctag aatgtgaata taacttttgt ggaccaatac taagaataac aagaagccca1920
gtggtgagga aagtgcgttc tcccagcact gcctcctgtt ttctccctct catgtccctc1980
cagggaaaat gactttattg cttaatttct gcctttcccc cctcacacat gcacttttgg2040
gccttttttt atagctggaa aaaacaaaat accaccctac aaacctgtat ttaaaaagaa2100
acagaaatga ccacgtgaaa tttgcctctg tccaaacatt tcatccgtgt gtatgtgtat2160
gtgtgtgagt gtgtgaagcc gccagttcat ctttttatat ggggttgttg tctcattttg2220
gtctgttttg gtccctccc tcgtgggctt gtgctcggca ccaaagagaa aaacgttttg2280
ggggcttgta atttatcttg aaaaatttaa ctttgagcga aaagggggag tgttttaccg2340
tgggggggta aaataaa
2357

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(2) INFORMATION ON SEQ ID NO. 148:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 907 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 148:

```

gttcattgtc tggcaccaag ctcccttgggg tgaattttct tccaaaagag tccggggagt 60
ccaggtoctt ctccctgggt actcataacg cggccccatt tctcactccc attgggcgtc120
gggttttctag agaagccaat cagtgtcgcc gcagttccca gggttctaaag tcccacgcac180
cccgcgggac tcatattttt cccagacgcg gaggttgggg tcatggcgcc ccgaagcctc240
ctcctgctgc tctcagggggc cctggccctg accgatactt gggcggggtga gtgcgggggtc300
cagagagaaa cggcctctgt ggggaggagt gagggggccc cccggtgggg gcgcaggact360
cagggagcgg cgcccggagg agggctctggc ggggtctcagc ccctcctcgc cccagggtc420
ccactccttg aggtatttca gcaccgctgt gtcgcggccc ggccgcgggg agccccgcta480
catcgccgtg gagtacgtag acgacacgca attcctgcgg ttcgacagcg acgccgcgat540
tccgaggatg gagccgcggg agccgtgggt ggagcaagag gggccgcagt attgggagt600
gaccacaggg tacgccaagg ccaacgcaca gactgaccga gtggccctga ggaacctgct660
ccgccgctac aaccagagcg aggctggtga gtgaacccgg ccggggggcg aggtcacag720
caccccccat ccggcacggg accgcccggg tccttcagag ttccgggtgc gaaatgtacc780
ccgagggagg ggaggcgttg gattgctgga gtggatactg ggggggtttt acgcaggttc840
attttcagtt taggccaata tccccgcggg ttgggcgggg atgggggggg gttaggtggg900
cgggggtt

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907

(2) INFORMATION ON SEQ ID NO. 149:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1987 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 149:

```

aggaggcgtg gggggggggg cgggggagtc aggggaagagc accatcgta agcagatgaa 60
gatcatccac gaggatggct actccgagga ggaatgccgg cagtaccggg cggttgtcta 120
cagcaacacc atccagtgcca tcattggccat tgtcaaagcc atgggcaacc tgcagatcga 180
ctttgccgac cctccagag cggacgacgc caggcagcta tttgactgt cctgcaccgc 240
cgaggagcaa ggcgtgctcc ctgatgacct gtccggcgct atccggaggc tctgggctga 300
ccatggtgtg caggcctgct ttggccgctc aagggaatac cagctcaacg actcagctgc 360
ctactacctg aacgacctgg agcgtattgc acagagtgc tacatcccca cacagcaaga 420
tgtgctacgg acccgcgtaa agaccacggg gatcgtggag acacacttca cttcaagga 480
cctacacttc aagatgtttg atgtgggtgg tcagcggctt gagcggaaga agtggatcca 540
ctgctttgag ggcgtcacag ccatcatctt ctgctgagct tgagcgccta tgacttggtg 600
ctagctgagg acgaggagat gaaccgcatg catgagagca tgaagctatt cgatagcatc 660
tgcaacaaca agtggttcac agacacgtcc atcatcctt tctcaacaa gaaggacctg 720
tttgaggaga agatcacaca cagtcccctg accatctgct tccctgagta cacagggggc 780

aacaatatg atgaggcagc cagctacatc cagagtaagt ttgaggacct gaataagcgc 840
aaagacacca aggagatcta cacgcacttc acgtgcgcca ccgacaccaa gaacgtgcag 900
ttcgtgtttg acgcccgcac cgatgtcatc atcaagaaca acctgaagga ctgcggcctc 960
ttctgagggg cagcggggcc tggcgggatg ggccaccgcc gactttgtac ccccaaccc1020
ctgaggaaga tgggggcaag aagatcacgc tccccgcctg tcccccgcc gcttttctcc1080
tctttcctct ctttgttctc agctccccct gtccccctcag ctccagacgt aggggagggg1140
ttgccacagg cctccctggt tgaagcctgc cttgtctga gatgctggtg atggccatgg1200
taccoccttc tgggcatctg ttctggtttt taaccattgt cttgttctgt gatgagggga1260
ggggggcaca tgcgtagctt cccaaggctg cgtctggagg ggcccctgct tctccagcct1320
ggacccccag ctttgcccaa caccagcccc tgccccagcc caagtccaaa tgtttacagg1380
gagcctcctg cccagtcacc caaccccagc cgctcggagg ccccaaagga aaaagcacaal440
gaagcgtgag acgccaccat tcttggaac cacagtccac ctgctcattc tcgtagcttt1500
ttaaaaaaat gaaagtaaag gaaaaaaaaa aaactgcaaa tctagaaaac ttttagaga1560
aaaactatgt aaaactgtca gatcctgacc agcaagcgcc cccccagccc cccttccaag1620
tgactccgtg ccttgagtggt gtctgcgtgt ttacaccctg cctctgctg gccgcccccg1680
tgcgagcggc acccctgccc tgccctccac agaattgggt tccaagggct gttccagaca1740
actgccaacg tcactgaggg ccctgcccc gcgccctgg ccccaggctc tattaacctal800
aaatgtagct ccctagcgt aacctaggaa ccgcccgtgc ctgctggggg gccacgcccc1860
tcatgccctt gtcccaggcc cggggccttc agcgttgaac acttccttgc tttttcacal1920
tgttttatgg aattgttcac ctgggttgaa ataataaaat gtagaaagga aaaaaaaaaa1980
aaaaaaa

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1987

(2) INFORMATION ON SEQ ID NO. 151:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 2906 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual
ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 151:

gtccagaagc	aaaaattaag	ttccccaagt	tttccatgcc	caagatcggc	atcccagggtg	60
tgaaaatggg	gggtggggga	gccgaggtcc	atgccagct	accctctctt	gaaggagact	120
tgagaggacc	agatgttaag	ctcgaagggc	ccgatgtttc	tctaaagggg	ccaggagtag	180
acttgccctt	agtgaacctc	tctatgccaa	aagtctctgg	gcctgacctt	gatctgaact	240
tgaaaggacc	aagtttgaag	ggagacctgg	atgcatctgt	tcccagcatg	aaggtgcatg	300
ctccagggct	caacctcagt	ggtgtcgggt	gcaaaatgca	ggtgggagga	gacggtgtga	360
aagtgccagg	gatcgatgcc	acaacaaagc	ttaacgttgg	ggcaccagat	gtgacactga	420
ggggaccaag	cctgcaggga	gatctggctg	tctctgggtg	catcaaattg	cctaaagtat	480
ccgtaggagc	tcctgatcta	agcttggagg	catccgaagg	cagcattaaa	cttcccaaaa	540
tgaagctgcc	ccaatttggc	atctctactc	cgggtgccga	cttgccacgtc	aatgccaaag	600
ggccacaggt	ttctggcgaa	ctgaaggggc	caggtgtgga	tgtgaacctg	aaagggcctc	660
ggatttcagc	accgaatgtg	gactttaact	tggaaaggacc	aaaagtgaag	gggagccctt	720
gggccactgg	tgagatcaaa	ggccccactg	tccgaggagg	tcttccaggc	attggtgttc	780
aaggccctag	aggaaacctc	cagatgcctg	gaattaagtc	ctctggatgt	gatgtgaacc	840
tgccaggcgt	gaatgtgaaa	ctcccaactg	ggcagatttc	tgggcctgaa	atcaaagggtg	900
gtctgaaagg	ttcagaagta	ggtttccatg	gggtgtctcc	tgatatcagt	gtgaaggggc	960
ctgcctttta	tatggcatct	cctgagtcag	attttggcat	caacttgaag	ggcccaaaaa	1020
tcaaaggagg	tgccgatgtt	tcaggggggt	tcagtgtccc	agacatcagc	cttgggtgaag	1080
ggcattttgag	tgtaaagggt	tccgggggtg	agtggaaagg	accccaagtc	tctctgtctc	1140
tcaacttgga	cacatctaag	tttgctgggg	gccttcattt	ctcaggacca	aaggtggaag	1200
gaggtgtgaa	aggaggtcag	attggactcc	aggctcctgg	gctgagtggt	tctgggcctc	1260
aaggtcactt	ggaaagtgga	tctggaaaag	taacattccc	taaaatgaag	atccccaaat	1320
ttaccttctc	tggccgtgag	ctggttggca	gagaaatggg	ggtggatgtt	cacttcccta	1380
aagcagaggc	cagcatccaa	gctggtgctg	gagacggcga	gtgggaagag	tctgaagtca	1440
aactgaaaaa	gtccaagatc	aaaatgccca	agtttaattt	ttccaaacct	aaagggaaag	1500
gtggtgtcac	tggctcacca	gaagcatcaa	ttcttgggtc	caaagggtgac	ctgaaaagtt	1560
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gcaaattctc	cttattttaa	agtaagaagc	cacggcaccc	ctcaaattca	ttcagtgatg	1680
aaagagagtt	ctctggacct	tccaccccca	cggggacgct	ggagtttgaa	ggtggggaag	1740
tgtctctgga	aggtgggaaa	gttaaaggga	aacacgggaa	gctgaaattc	ggtacctttg	1800
gtggattggg	gtcaaagagc	aaaggtcatt	atgaggtgac	tgggagcgat	gatgagacag	1860
gcaagttaca	ggggagtggg	gtgtccctgg	cctctaagaa	gtcccgaact	tcctcctctt	1920
ctagcaatga	cagtgggaat	aaggttggca	tccagcttcc	cgaggtggag	ctgtcagttt	1980
ccacaaagaa	agagtagcag	gcctttgtag	aacaaaacat	cagccttggg	tgggtgtgtc	2040
ctatataaac	tccaaaggga	aacacaccga	ctgcctcagc	aatcatgcaa	agaccttgcc	2100
tggcccgggt	gcaagcgctg	aaaaaccgac	cgcctgtagg	ctcctggaac	tatacagata	2160
ggtaaagagt	tccaagtctg	tccagcccat	gtgcaaagtc	aacagtattt	gccttaagat	2220
ttcatatata	tatatTTTTT	tgcattgact	gctgagagct	cctgtttact	aagcaagctt	2280
ttgtgtttat	tatctcattt	tttactgaac	attgttagtt	ttggggtaat	ggaaacccac	2340
tttttcattg	taatgacttt	gggggctttt	gttagtaagg	gtgggtgggg	tgatgggttg	2400
cagacggagg	tcaggtcttc	ctctttcctg	agactggatc	tgttcaaaca	gcaaacgccc	2460
acagatggcc	cagaggtggt	ggtagtccag	gtgtgtgggt	gttttttaggg	ttcttttagtg	2520
ttgtttcttt	caccaggggg	tgggtgtccc	agccagtttg	gtgctgacgg	tgagaggaaa	2580
ttagaatctg	tttgcaaatt	gtccaaccca	ccccctcaac	atgaggggct	tccattttct	2640
gtgttttgta	agggaaactgt	ttccttcatt	ccgccatggt	cctgatatta	gttctgattt	2700
ctttttaaca	aatgttatca	tgattaaaga	aatttccagc	actttaatgg	ccaatttaact	2760
gagaatgtaa	gaaaattgat	gctgtacaag	gcaaataaag	ctgtttatta	accttgaaaa	2820
aaaaaaaaaa	aagggaggga	ggggggggag	gggggagggg	gggggggggt	aggggggggg	2880
agggagggaa	agggggggcg	gggagg				2906

(2) INFORMATION ON SEQ ID NO. 153:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 2367 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 153:

```

gcctcccgcc cgcgcgctct gtctccctct ctcacaaaac tgcccaggag tgagtagctg 60
ctttcgggtcc gccggacaca ccggacagat agacgtgcgg acggcccacc accccagccc 120
gccaaactagt cagcctgcgc ctggcgccctc cctctccag gtccatccgc catgtggccc 180
ctgtggcgcc tcgtgtctct gctggccctg agccaggccc tgccctttga gcagagaggc 240
ttctgggact tcaccctgga cgatgggcca ttcattgatga acgatgagga agcttcgggc 300
gctgacacct cgggcgtcct ggaccgggac tctgtcacac ccacctacag cgccatgtgt 360
cctttcgggt gccactgcca cctgcgggtg gttcagtgtc ccgacctggg tctgaagtct 420
gtgcccagaag agatctcccc tgacaccacg ctgtctggacc tgcagaacaa cgacatctcc 480
gagctccgca aggatgactt caagggtctc cagcacctct acgcccctcg cctgggtgaac 540
aacaagatct ccaagatcca tgagaaggcc ttcagcccac tgcggaagct gcagaagctc 600
tacatctcca agaaccacct ggtggagatc ccgcccaccc taccagctc cctgggtggag 660
ctccgcatcc acgacaaccg catccgcaag gtgcccgaag gagtgttcag tgggctccgg 720
aacatgaact gcacgcagat gggcggaagc cactggaga acagtggctt tgaacctgga 780
gccttcgatg gcctgaagct caactacctg cgcattctcag aggcgaagct gactggcatc 840
cccaaagacc tccctgagac cctgaatgaa ctccacctag accacaacaa aatccaggcc 900
atcgaactgg aggacctgct tcgctaactc aaagtgtaca ggctgggcct agggccacaa 960
cagatcagga tgatcagaga cgggagctcg agcttccctg ccacctccg ggagctccac1020
ttggacaaca acaagttggc cagggtgccc tcagggtctc cagacctcaa gctcctccag1080
gtgggtctatc tgcaactcaa caacatcacc aaagtgggtg tcaacgactt ctgtcccatg1140
ggcttcgggg tgaagcgggc ctactacaac ggcacagcc tcttcaacaa ccccgctgcc1200
tactgggagg tgcagccggc cactttccgc tgcgtcactg accgctggc catccagttt1260
ggcaactaca aaaagtagag gcagctgcag ccaccgagg gcctcagtgg gggctctctg1320
ggaacacagc cagacatcct gatggggagg cagagccagg aagctaagcc agggcccagc1380
tgcgctccaa ccagcccccc acctcgggtc cctgacccca gctcgatgcc ccacaccgcl440
ctctccctgg ctcccaaggg tgcaggtggg cgcaaggccc ggcccccatc acatgttccc1500
ttggcctcag agctgcccct gctctcccac cacagccacc cagaggcacc ccatgaagct1560
tttttctcgt tcactcccaa acccaagtgt ccaaggctcc agtcctagga gaacagtccl1620
tgggtcagca gccaggaggc ggtccataag aatggggaca gtgggctctg ccagggtgcl1680
cgcaactgtc cagacacaca tgttctgttc ctctcctca tgcatttcca gcctttcaac1740
cctccccgac tctgcggctc ccctcagccc ccttgcaagt tcatggcctg tccctccaag1800
accctgtctc cactggccct tcgaccagtc ctcccttctg ttctctcttt ccccgctcct1860
cctctctctc tctgtgtgtg tgcgtgtgtg gtgtgtgtgt gtgtgtgtgt gtcttgtgt1920
tcctcagacc tttctcgctt ctgagcttgg tggcctgttc cctccatctc tccgaacctg1980
gcttcgcctg tccctttcac tccacacct ctggccttct gccttgagct gggactgctt2040
tctgtctgtc cggcctgcac ccagcccctg cccacaaaac cccagggaca gcggtctccc2100
cagcctgccc tgctcaggcc ttgcccccaa acctgtactg tcccggagga ggttgggagg2160
tggaggccca gcatcccgcg cagatgacac catcaaccgc cagagtccca gacaccggtt2220
ttcctagaag cccctcacc ccaactggccc actggtggct aggtctcccc ttatccttct2280
ggtccagcgc aaggaggggc tgcttctgag gtcggtggct gtctttccat taaagaaaca2340
ccgtgcaacg tgaaaaaaaa aaaaaaa

```

2367

(2) INFORMATION ON SEQ ID NO. 154:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1314 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 154:

```

cacacacctg cacataactca tgcattgcaca tgtacacacg cagtcacaca tgcactcacg 60
cagttgcaca cacacgcctg ctactcccca cactgtgtgc actcaggtgg ctgtgttgga 120
cagttggggc cagggtctcc ctgctgtctt gtggggcccg catctgtctt ccttctttct 180
ccccaggtac ttctactccc gaaggattga catcaccctg tcgtcagtca agtgcttcca 240
caagctggcc tctgcctatg gggccaggca gctgcagggc tactgcgcaa gcctctttgc 300
catcctcctc cccagggacc cctcgttcca gatgccctg gacctgtatg cctatgcagt 360
ggccacaggg gacgccctgc tggagaagct ctgcctacag ttcctggcct ggaacttcga 420
ggccttgacg caggccgagg cctggcccag tgtccccaca gacctgtctc aactgctgct 480
gccaggagc gacctggcgg tgcccagcga gctggcccta ctgaaggccg tggacacctg 540
gagctggggg gagcgtgcct cccatgagga ggtggagggc ttggtggaga agatccgctt 600
ccccatgatg ctccctgagg agctctttga gctgcagttc aacctgtccc tgtactggag 660
ccacgaggcc ctgttccaga agaagactct gcaggccctg gaattccaca ctgtgccctt 720
ccagttgctg gcccgggtaca aaggcctgaa cctcaccgag gatacctaca agccccggat 780
ttacacctcg cccacctgga gtgcctttgt gacagacagt tcctggagtg cagcgaagtc 840
acaactggtc tatcagtcca gacgggggccc tttggtcaaa tattcttctg attacttcca 900
agccccctct gactacagat actaccctta ccagtccttc cagactccac aacaccccag 960
cttcctcttc caggacaaga ggggtgtcctg gtccttggtc tacctcccca ccatccagag 1020
ctgctggaac tacggcttct cctgtctctc ggacgagctc cctgtcctgg gcctcacca 1080
gtctggcggc tcagatcgca ccattgccta cgaaaacaaa gccctgatgc tctgcgaagg 1140
gtcttctgtg gcagacgtca ccgatttcga gggctggaag gctgcgattc ccagtgcctt 1200
ggacaccaac agctcgaaaga gaacctcctc cttccctgac cccggcagag cttttcaaac 1260
gggctttccg caacgggtca atccgcgcct ttctaacttg acaaacttct tcag 1314

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(2) INFORMATION ON SEQ ID NO. 155:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 965 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 155:

```

cctcccaaag gaactcccca atactagaac tcatcccaaa ccccttgac ttcaacaaat 60
taacgaaccc attccccaac ccacaatacc ccaccctcca acaacctaaa acaacgactt120
catgctcccg tgcccaaaac gcacagacct tcaacctgga cggctccctg atctatgaaa180
gactcccatc gtcttgacgt cggctcttcac cagcgtgcgg cagaaaaatcg agaaggagga240
tgacagtga ggcgaggaga gtgaggagga ggaagagggc gaggaggaag gctccgaatc300
cgaatctcgg tccgtcaaag tgaagatcaa gcttgccggc aaggagaagg cacaggaccg360
gctgaagggc ggccggcggc ggccgagccg agggctccga gccaaagccg tcgtgagtga420
cgatgacagt gaggaggaac aagaggagga ccgctcagga agtggcagcg aagaagactg480
agccccgaca ttccagtctc gaccccgagc ccctcgttcc agagctgaga tggcataggc540
cttagcagta acgggtagca gcagatgtag tttcagactt ggagtaaaac tgtataaaca600
aaagaatctt ccatatttat acagcagaga agctgtagga ctgtttgtga ctggccctgt660
cctggcatca gtagcatctg taacagcatt aactgtctta aagagagaga gagagaattc720
cgaattgggg aacacacgat acctgttttt cttttccgtt gctggcagta ctgttgccgc780
gcagtttgga gtcactgtag ttaagtgtgg atgcatgtgc gtcaccgtcc actcctccta840
ctgtatttta ttggacaggt cagactcgcc gggggcccgg cgagggtatg tcagtgtcac900
tggatgtcaa acagtaataa attaaaccaa caacaaaacg caaaaaaaaa aaaccaaggg960
cgaga

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(2) INFORMATION ON SEQ ID NO. 156:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 3101 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

(A) ORGANISM: HUMAN

(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 156:

```

ctcgcgccgg acacagggag cagcgagcac gcgtttcccg caacccgata ccatcggaca 60
ggattttctcc gcctcagccc aacggggagg gctagttgca catagtgatt tagatgaaag 120
agctattgaa gctttaaaag aattcaatga agacggtgca ttggcagttc ttcaacagtt 180
taaagacagt gatctctctc atgttcagaa caaaagtgcc tttttatgtg gagtcatgaa 240
gacttacagg cagagagaaa aacaagggac caaagtagca gattctagta aaggaccaga 300
tgaggcaaaa attaaggcac tcttgaaaag aacaggctac acacttgatg tgaccactgg 360
acagaggaag tatggaggac cacctccaga ttccgtttat tcaggtcagc agccttctgt 420
tggcactgag atattttgtgg gaaagatccc aagagatcta tttgaggatg aacttggtcc 480
attatttgag aaagctggac ctatatggga tcttcgtcta atgatggatc cactcactgg 540
tctcaataga ggttatgcgt ttgtcacttt ttgtacaaaa gaagcagctc aggaggctgt 600
taaactgtat aataatcatg aaattcgttc tggaaaacat attggtgtct gcatctcagt 660
tgccaacaat aggctttttg tgggctctat tcctaagagt aaaaccaagg aacagattct 720

```

tgaagaat	agcaaagtaa	cagaggggtct	tacagacgctc	attttataacc	accaaccgga	780
tgacaagaaa	aaaaacagag	gcttttgcct	tcttgaatat	gaagatcaca	aaacagctgc	840
ccaggtaaaa	gtgctgtttg	tacgcaacct	tgccaatact	gtaacagaag	agatttttaga	900
aaaggcattt	agtcagtttg	ggaaactgga	acgagtgaag	aagttaaaag	attatgcggt	960
cattcatttt	gatgagcgag	atgggtgctgt	caaggctatg	gaagaaatga	atggcacaaga	1020
cttgaggagg	gaaaatattg	aaattgtttt	tgccaagcca	ccagatcaga	aaaggaaaaga	1080
aagaaaagct	cagaggcaag	cagcaaaaaa	tcaaagtgtat	gacgattact	actattatgg	1140
tccacctcat	atgccccctc	caacaagagg	tcgagggcgt	ggaggtagag	gtgggttatgg	1200
atatcctcca	gattattatg	gatatgaaga	ttattatgat	tattatggtt	atgattacca	1260
taactatcgt	ggtggatatg	aagatccata	ctatgggtat	gaagattttc	aagttggagc	1320
tagaggaagg	ggtggtagag	gagcaagggg	tgctgctcca	tccagaggte	gtggggctgc	1380
tcttccccgc	ggtagagccg	gttattcaca	gagaggaggt	cctggatcag	caagaggcgt	1440
tcgagatgca	agaggaggtg	cccaacaaca	aagaggccgc	gggcagggaa	aaggggtcga	1500
ggccgggtcct	gacctgttac	aatgaagact	gacttgctat	gtgggattac	accagaagct	1560
tgcagtggag	taatggtaag	gaaatcaagc	aaccttaaat	atgtcggctg	tataggagca	1620
tattctattg	cagaagacct	tcctatgaag	atcatggaat	caaatacggg	acattgaact	1680
aatacttgga	ctttgatatg	aatttcttta	acaattttct	ctgcagtgca	agttattaaa	1740
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gtatcttaat	aaagaataaaa	gttcttttaa	aaatctgctc	taagtagatt	tttccccctt	1860
tttaaatata	ggatcccaac	agtggatatt	tgaaatattc	tcttgaat	gtgcatttaa	1920
attttattgc	agtggtatag	atgaatgcc	ctgatggat	ccttaaattt	tatttctgct	1980
caccaaggtt	aatcatgatt	gtctatatct	tttttatagt	gatcactttt	gaattgtggt	2040
cagatatgca	gtttcagggt	taatcatcag	agctgggttag	tcaggcattc	cagatagtgg	2100
ttcttttcag	aaccttttta	aaagggttgg	tttaactacct	cagtagcaga	ggattgaact	2160
ataccctgtc	tgtactgtac	atagaaaatc	tttgtagata	aaagcaaggc	ttgttaaata	2220
tgatatgagg	gtaagatttt	aatataccaa	atgtaacatt	ccttagttgcc	tttagtttca	2280
gaggcttgta	agacttcctc	atgaccatca	taacaggcct	tgcttttgc	gtattttgtg	2340
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caagatgtta	cttttgtaag	acatcagatg	ttcaaaaaag	tgcatccgaa	cctgtactaa	2460
atactgcagt	gtccctttat	aaaaagtcag	actaaaaactg	acaattgtac	agcgaagcct	2520
gacatttgga	tattttgaag	ttttttcata	aatcatagaa	attagtatat	ggctgtagtt	2580
tagcttttta	ggtaaaaagg	atgtttcatt	agtgcatttc	ttcctgctga	tcactgtaaa	2640
catgtgaatc	agctttccat	ttcttatgca	ggcatgata	acttgtagag	tagagtacaa	2700
tcatttgtgc	tatgttttta	attttctaaa	gcaccttgat	gacagtgagt	gtccagtggg	2760
gaagcatcct	ctattgaacc	acctcaaaa	atttttttgc	caagtcctaa	gttgatagct	2820
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ccttccccaa	agggatactg	cagttatata	acatacccaa	taggcaccac	gatgaagatc	2940
agagcttata	cttaattaag	gttttataca	caccagttcc	ccagtaaatg	caaatttaac	3000
aagaaaatca	gacatgtcat	atgttcaaaa	tgctcatggc	aaacaatcat	tttgcattcc	3060
tgcaaaataaa	attgttttat	actgtaaaac	aaaaaaaaaa	a		3101

(2) INFORMATION ON SEQ ID NO. 157:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 983 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 157:

```

ggggcgggag cggcgggtcca gactggggag ggacgcgcac cggccaggag gcttcaagag 60
gagggcacta gggccctgcg agcggcgtct taaccggcgg cgctaggact ccgcgggaaa120
cggcgggggc ggacgggcgg caccaggacc caggggaacc gcgacgggcg ggcggcgagc180
agggccggga gccgggaggt gcgggcggcg gcgctggacc cgacgcggcg agagaggccc240
cgagatgccg agcaagaaga agaagtacaa cgcgcggttc ccgccggcgc ggatcaagaa300
gatcatgcag acggacgaag agattgggaa ggtggcggcg gcggtgcctg tcatcatctc360
ccgggcgctc gagctcttcc tagagtcgct gttgaagaag gcctgccagg tgacccagtc420
gcggaacgga aagaccatga ccacatccca cctgaagcag tgcatcgagc tggagcagca480
gtttgacttc ttgaaggacc tggtggcatc tgttcccgac atgcaggggg acggggaaga540
caaccacatg gatggggaca agggcgcccg cagggccgga agccaggcag cggcgggccgg600
aagaacggtg ggatgggaac gaaaagcaag gacaagaagc tgtccgggac agactcggag660
caggaggatg aatctgagga cacagatact gatggggaag aggagacatc acaacccccca720
ccccaggcca gccacccctc tgcccacttt cagagccccc cgacaccctt cctgcccttc780
gcctctactc tgcccttgcc ccagcgccc ccgggcccct cagcacctga tgaagaggac840
gaagaagatt acgactccta gcgccttctg cccccagac catagcccct tttagttggt900
tttagttgct ctggggggag gagagaaggt agagctgttc ttaaatttat taacaaaaaa960
aataaaaggg aaaaaaaaaa aaa                                     983

```

(2) INFORMATION ON SEQ ID NO. 158:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 293 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 158:

```
FIDSYRCFQP KQEGAFTCWS AVTGARHLNY GSRLDYTLGD RTLVIDTFQA SELLPEVMGS 60
DHCPVGAVLS VSSVPAKQCP PLCTRFLPEF AGTQKILRF LVPLEQSPVL EQSTLQHNNQ120
TRVQTCQNK A QVRSTRPQPS QVGSSRGQKN LKSYFQPSPS CPQASPDIEL PSLPLMSALM180
TPKTPEEKAV AKVVKGQAKT SEAKDEKELR TSFWKSVLAG PLRTPLCGGH REPCVMRTVK240
KPGPNLGRRF YMCARPRGPP TDPSSRCNSS SGAGPAEPME AWGHLAWSPL HMI 293
```

(2) INFORMATION ON SEQ ID NO. 159:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 131 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 159:

```
ETLREKQEEA QGRGAGLRSC AGVTMPDVPR PPLVQLGLLQ RKNCTGRRGQ WEDPGAWHTC 60
RSGGPSWVLA SSQYASHMAP CGPHRGVCAR APPAQTSRMR SVTPSHLWLL KSWPAPSPLW120
PLPSLLESSG S 131
```

(2) INFORMATION ON SEQ ID NO. 160:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 94 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 160:

KRRPKLGPGF FTVRITHGSL WPPQRGVRKG PASTDFQNEV RNSFSSLASE VLACPFTTLA60
TAFSSGVFGV MRALISGRLG SSMSGAWGQ LGEG 94

(2) INFORMATION ON SEQ ID NO. 161:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 136 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 161:

LHQLAAQRLY LRPVRVGAWA LSLPGERRAE ISNQWSALVT WIPEGREGST VSSAADCCSK 60
NVFSTSFESP SHGNPSTPTR DPTPAVSRI STCTSRDPND SCTNEHYGSC SNCLSTHCYV120
GWKAFGRKKG SSRLKG 136

(2) INFORMATION ON SEQ ID NO. 162:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 281 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 162:

PGSQKVAKAV PFPQRRTAAV RMSFPPHLNR PPMGIPALPP GIPPPQFPGF PPPVPPGTPM 60
IPVPMSIMAP APTVLVPTVS MVGKHLGARK DHPGLKAKEN DENCGPPTTV FVGNISEKAS120
DMLIRQLLAK CGLVLSWKRV QGASGKLQAF GFCEYKEPES TLRALRLLHD LQIGKKLLV180
KVDAKTKAQL DEWKAKKKAS NGNARPETVT NDDEEALDEE TKRRDQMIKG AIEVLIREYS240
SELNAPSQES DSHPQEEEEG KEGGHFPQIS SGPTDPLSTH H 281

(2) INFORMATION ON SEQ ID NO. 163:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 103 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 163:

CSLVQESLGS LEVQVEEILE TAGVGSVLGV LGFPWEGDSN EVEKTFLLQQ SAAETVLPS 60
 RPSGIQV TSA LHWFEISARR SPGRLSAQAP TRTGRKYSRC AAS 103

(2) INFORMATION ON SEQ ID NO. 164:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 127 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 164:

NISLLDHPGL QSCLYFLFWI LFTNRERYIS AWKWPDVWKL DIWHFGLHSH GYYSHNKDGS 60
 GNSFLDLDP SRYLGIYYIL FCIFVLWRD SLAIFGLPEY VFCVYSAPVK WFCLVCHNPH120
 GCYMSIS 127

(2) INFORMATION ON SEQ ID NO. 165:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 382 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 165:

```
HEVLCCRMALP LQKAKVIRLI KISPEKPITL AVGDGANDVS MIQEAHVGIG IMGKEGRQAA 60
RNSDYAIARF KFLSKLLFVH GHFYIIRIAT LVQYFFYKNV CFITPQFLYQ FYCLFSQQTLL120
YDSVYLTLYN ICFTSLPILI YSLLEQHVDP HVLQNKPTLY RDISKNRLLS IKTFLYWTIL180
GFSHAFFFF GSYLLIGKDT SLLGNGQMFG NWTFTLVFT VMVITVTIKM ALETHFWTWI240
NHLVTWGSII FFFVFSLFYG GILWPFLLSQ NMYFVFIQLL SSGSAWFAII LMVVTCLFLD300
IIKKVFDRHL HPTSTKAQM YSNTVALSDE FIALQPLSRA RNQLSKLSLL KQMQRVSSAWT360
PCAVSRKEKQ RVHLLLECWN EL
```

382

(2) INFORMATION ON SEQ ID NO. 166:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 85 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 166:

```
QELNKHKIHI LGAQKWPENP SIKQGGYKIK YNRSPGNEMV DPSPKMSFQS HLYCDCNNHD60
CEDQSAKCPV SKHLAISKQR CIPFY
```

85

(2) INFORMATION ON SEQ ID NO. 167:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 496 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 167:

RLEKGPLPFQ MPMRLPETQ VLPGEIDETP LSKPGHDLAS MEDKTEKWSS QPEGPLKLKA 60
 SSTDMPSQIS VVNVDQLWED SVLTVKFPEL MVPRFSFPAP SSEDDVFIPT VREVQCPEAN120
 IDTALCKESP GLWGASILKA GAGVPGEQPV DLNLPLEAPP ISKVRVHIQG AQVESQEVTI180
 HSIVTPEFVD LSVPTFTSTQ IVRESEIPTS EIQTPSYGFS LLKVKIPEPH TQARVYTTMT240
 QHSRTQEGTE EAPIQATPGV DSISGDLQPD TGEFFEMISS SVNVLGQOTL TFEVPSGSQL300
 ADSCSDEEPA EILEFPPDDS QEATTPLADE GRAPKDKPES KKSGLLWFWL PNIGFSSSV360
 ETGVDSKNDV QRSAPIQTQP EARPEAELPK KQEKAGWFRF PKLGFSSSPT KKSSTEDGA420
 ELEEQKLQEE TITFFDARES FSPEEKEEGE LIGPVGTGLD SRVMVTSAAAR TELILPEQDR480
 KADDESKGSG LGPNEG 496

(2) INFORMATION ON SEQ ID NO. 168:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 125 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 168:

SLPASMYWDS KHSHLKFLLA TSLQTAVQMR SQQKFLSFPL MIAKRQPHHW QMKAGLQKTN 60
 QKVKNLVCSS FGFQTLGFPL LLMRQVLIPK MTSRDLLEPK HSLRHDQRQN CLKNRRRQAG120
 SDFPN 125

(2) INFORMATION ON SEQ ID NO. 169:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 130 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 169:

MGADLWTSFL ESTPVSTEE ENPMFGSQNQ SRPDFLLSGL SFGALPSSAS GVVASWLSSG 60
 GNSRISAGSS SEQLSASWWP EGTSNVSVCC PSTLTLEEII SNGSPVSGWR SPEMESTPGV120
 ACMGASSVPS 130

(2) INFORMATION ON SEQ ID NO. 170:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 123 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 170:

VVYRGVKCFI DKKKKTALEP TYSSSSSSSS SSSSSSSSSS SSSSSSSSSS SSFFFLLFSA 60
 LTTPFFAASG FPLARYAAIS FSYFSFSTSQ SFHKAACHLQ QCYSTSLPVS SQHHQWTGQD120
 VLL 123

(2) INFORMATION ON SEQ ID NO. 171:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 157 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 171:

KKLYLLRSIQ NVNKTAAIFF LQLQSGIOLT EQQLSSYKLH QRQLKMKKIK PKKKTKRKKK 60
 KKQKTKLPSP YITNLCCAPT RTCFKFPCQF TTPILYQARL VAIENTTRTG LSKDTFGSVL120
 TIQKKTLYSL KTNLTQPYIS IFFFKRSELC TGGLNAL 157

(2) INFORMATION ON SEQ ID NO. 172:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 152 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 172:

```

LNMGKGDPKK PRGKMSSYAF FVQTCREEHK KKHPDASVNF SEFSKKCSER WKTMSAKEKG 60
KFEDMAKADK ARYEREMKTY IPPKGETKKK FKDPNAPKRP PSAFFLFCSE YRPKIKGEHP120
GLSIGDVAKK LGEMWNNTAA DDKQPYEKKA AK                                     152

```

(2) INFORMATION ON SEQ ID NO. 173:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 281 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 173:

```

SGSAGPGPRG PRATESGKRM DCPALPPGWK KEEVIRKSGL SAGKSDVYYF SPSGKKFRSK 60
POLARYLGNT VDLSSFDFRT GKMMPSKLOK NKQRLRNDPL NQNKGKPDNL TTLPIRQTAS120
IFKQPVTKVT NHPSNKVKSD PQRMNEQPRQ LFEWKRLQGL SASDVTEQII KTMELPKGLQ180
GVGPGSNDST LLSAVASALH TSSAPITGQV SAAVEKNPAV WLNTSQPLCK AFIVTDEDIR240
KQEERVQQVR KKLEEALMAD ILSRAADTEE MDIEMDSGDE A                               281

```

(2) INFORMATION ON SEQ ID NO. 174:

- (i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 102 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 174:

IIDIYIKNTS KKALVSAIKK LYVLGYIFFL TGKSQWKHFC SISRNFLLGK VGRKLPDHIL 60
RLHLHCPFY PSLLYQQLAT RCLPSVLLPI SCVLAVLALP VS 102

(2) INFORMATION ON SEQ ID NO. 175:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 147 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 175:

IYTSKIHLKR HWLVLLKSSM CSGTFFFLQA KASGNIFVQF LGIFSWGKSV ESYLIIFLGF 60

ISTVHFNIHL FCISSSRQDV CHQCFQFLA YLLYSLEFLFP DVFICDNKSF AEGLRCVKPN120
SRVLFHSSGD LPCDWRRACV QSTGNSR 147

(2) INFORMATION ON SEQ ID NO. 176:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 85 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 176:

ECPLGARGPW EPRHFFPLGR GARSRHPCTH GRLAPPQSPP HSQQPFHSHC PSRSPQPSLR60
PHPHPLRAQG CNPSLSTTHR WYSWG 85

(2) INFORMATION ON SEQ ID NO. 177:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 128 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 177:

NALWGPGAPG SPATLSHLAG VPAAATPARM AGWHPPRALP TASSLSTVTA LPAVPSLPYG 60
LTRTPSEPR ATPHYPPRTD GTAGAEQPHV EPERVPGARG QDAGGRMTAC PCLTSWGTTL120
DRGIGQDP 128

(2) INFORMATION ON SEQ ID NO. 178:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 106 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 178:

MPFEGGQGPLG APPFFPTWPG CPQPPPLHAW QAGTPPEPSP QPAAFPQSLP FPQSPAFPTA 60
SPAPPQSPGL QPLIIHHAQM VQLGLNNHMMW NQRGSQAPED KTQEAE 106

(2) INFORMATION ON SEQ ID NO. 179:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 77 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 179:

GNPELPWRKF QCQHSCSLWP SPTLWPEIPQ SNLEPKRTQR TLDPNCPRPS PEVGVTNSSG60
LRHMKKLYIN PRQATNP 77

(2) INFORMATION ON SEQ ID NO. 180:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 64 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 180:

PPTHTRQVGE EIQSCHGENS SVSILAPCGP LLHSGQRYHS QTWSQKGHKG LSTQTAPDPL60
QRLG 64

(2) INFORMATION ON SEQ ID NO. 181:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 206 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 181:

```
RLSCAGTLSG SGEHPSRRLT QGRWVRKSRV AMEKIPVSAF LLLVALSYTL ARDTTVKPGA 60
KKDTKDSRPK LPQTLSRGWG DQLIWTQTYE EALYKSKTSN KPLMIIHHL D ECPHSQALKK120
VFAENKEIQK LAEQFVLLNL VYETTDKHL S PDGQYVPRIM FVDPSLTVRA DITGRYSNRL180
YAYEPADTAL LLDNMKKALK LLKTEL                                     206
```

(2) INFORMATION ON SEQ ID NO. 182:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 206 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 182:

```
RVFQEEELVR RQRNGASGPR PGLRRLRGGR RAVRRKERLL HRQLPAVHKR GARVKLSSPE 60
RDVERDVFLY RAYLAQRKFG VVLDEIKPSS APELQAVRMF ADYLAHESRR DSIVAELDRE120
MSRSVDVTNT TFLMAASIY LHDQNPDAAL RALHQGDSLE CTAMTVQILL KLDRLDLARK180
ELKRMQDLDE DATLTQLKVL VSLQRV                                     206
```

(2) INFORMATION ON SEQ ID NO. 183:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 111 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 183:

LPRPRESEGO HRGRAGPRDE QERGRDQHHL PAHGRHLHLS RPEPGCRPAC AAPGGQPGVH 60
 SHDSADPAEA GPPGPRPEGA EENAGPGRGC HPHPAQGLGK LATGVKAQGS F 111

(2) INFORMATION ON SEQ ID NO. 184:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 165 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 184:

GTILPIPEIR RILELLHPLQ AYQDLELGEG GILVQVLHSL QLLPGEVQAV QLQDDLHCHG 60
 CALQAVPLVQ RTQGGIRVLV VEIDGGGHEQ EGGVGHVHAP AHLVQLGHD AVPPTLVGEV120
 VSKHAHGLEL RGRGGDLIQ DHTELPLRQV RSIQEDVPLH VSLWA 165

(2) INFORMATION ON SEQ ID NO. 185:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 75 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 185:

LLSMRMILKP QSFMILMLR SSNRVTWKLL LIGLDYIRYQ MENQKTSLLL MENSCTRLLL60
 LKLLNPLINV GKHC L 75

(2) INFORMATION ON SEQ ID NO. 186:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 340 amino acids
- (B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 186:

```
RTVIDAMSAL LRLLRGTGAPA AACLRLGTSA GTGSRRAMAL YHTEERGQPC SQNYRLFFKN 60
VTGHYISPFH DIPLKVNSKE ENGIPMKAR NDEYENLFNM IVEIPRWTNA KMEIATKEPM120
NPIKQYVKDG KLRYVANIFP YKGYIWNYG TLPQTWEDPHE KDKSTNCFGD NDPIDVCEIG180
SKILSCGEVI HVKILGILAL IDEGETDWKL IAINANDPEA SKFHDIDDDVK KFKPGYLEAT240
LNWFRLYKVP DGKPENQFAF NGEFKNKFAF LEVIKSTHQC WKALLMKKCN GGAINCTNVQ300
ISDSPFRCTQ EEARSLVESV SSSPNKESNE EEQVWHFLGK 340
```

(2) INFORMATION ON SEQ ID NO. 187:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 131 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 187:

```
LSILYILFNG IHWLLGGNLH FSICPPRYFY NHIKQILIFI ISCFLHRNAI FLFRVHLQRN 60
IMKGGNVVTS YILKEEAVIL RAGLAALLSV VQGHSTARPG PCTGPPQPQAR SGWGTRAQQP120
QQRAGHVNDG P 131
```

(2) INFORMATION ON SEQ ID NO. 188:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 436 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 188:

```
GRGMGRVQLF EISLSHGRVV YSPGEPLAGT VRVRLGAPLP FRAIRVTCIG SCGVS NKAND 60
TAWVVEEGYF NSSLSLADKG SLPAGEHSFP FQFLLPATAP TSFEGPFGKI VHQVRAAIHT120
PRFSKDHKCS LVFYILSPLN LNSIPDIEQP NVASATKKFS YKLVKTGSVV LTASTDLRGY180
VVGQALQLHA DVENQSGKDT SPVVASLLQK VSYKAKRWIH DVRTIAEVEG AGVKAWRRAQ240
WHEQILVPAL PQSALPGCSL IHIDYYLQVS LKAPEATVTL PVFIGNIAVN HAPVSPRPGL300
GLPPGAPPLV VPSAPPQEEA EAEAAAGGPH FLDPVFLSTK SHSQRQPLLA TLSSVPGAPE360
PCPDGSPAS HPLHPLCIS TGATVPYFAE GSGGPVPTTS TLILPPEYSS WGYPYEAPPS420
YEQSCGGVEP SLTPES 436
```

(2) INFORMATION ON SEQ ID NO. 189:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 127 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 189:

```
SVLETGVVSP GPSSLPPPPQ PQGEEGGCRG AGRGWAGPEW ARLGQERRHE ALGAPVPGQR 60
PGLPGEGSTG SALRGQAGFH AAAALLIRRW GLIGVAPRTV LWRKNQAGS GHWPPGALCK120
VGDSGTC 127
```

(2) INFORMATION ON SEQ ID NO. 190:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 213 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 190:

```
LVLNVGMQLQ CLPHHIAAEI SAGCEDHAAR LHQLVGELLG GRGHVGLLNW WDAVQVQGAQ 60
DIEHEAALVI LGKPWRVDGG PHLVHDLPER TLKGRGCSGR KQELEGEAVL SSGQAPLVCQ120
RQGTVEVTLL HYPRCVISLV GDPAGTYAGH PDGSRQRCP QAHAHGPSQR LPGAVDDAAV180
AQADLEELHS PHAAASPASR AATPPPAARE SRL 213
```

(2) INFORMATION ON SEQ ID NO. 191:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 635 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 191:

```
GGVSPWRACV QQRMEESEPE RKRARTDEVP AGGSRSEAED EDDDYVPYV PLRQRRQLLL 60
QKLLQRRRKQ AAEEEQQDSG SEPRGDEDDI PLGPQSNVSL LDQHQLKEK AEARKESAKE120
KQLKEEEKIL ESVAEGRALM SVKEMAKGIT YDDPIKTSWT PPRYVLSMSE ERHERVRKKY180
HILVEGDGIP PPIKSFKEMK FPAAILRGLK KKGIIHPTPI QIQGIPTILS GRDMIGIAFT240
GSGKTLVFTL PVIMFCLEQE KRLPFSKREG PYGLIICPSR ELARQTHGIL EYYCRLLED300
SSPLLRCALC IGGMSVKEQM ETIRHGVHMM VATPGRLMDL LQKKMVSLDI CRYLALDEAD360
RMIDMGFEGD IRTIFSIFKG QRQTLLFSAT MPKKIQNFAK SALVKPVTIN VGRAGAASLD420
VIOEVEYVKE EAKMVYLLEC LQKTPPPVLI FAEKKADVDA IHEYLLKGV EAVAIHGGKD480
QEERTKAIEA FREGKKDVLV ATDVASKGLD FPAIQHVINY DMPEEIEYV HRIGRTGRSG540
NTGIATTFIN KACDESVLMD LKALLLEAKQ KVPPVLQVLH CGDESMLDIG GERGCAFCGG600
LGHRITDCPK LEAMQTKQVS NIGRKDYLAH SSMDF 635
```

(2) INFORMATION ON SEQ ID NO. 192:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 147 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 192:

```

KPSRRCRPCC RCCIAGMSPC WTLEESAAPV SAGAWVIGSL TAPNSRLCRP SRSATSVART 60
TWPTAPWTSE PTVFPSLQEA SVPKTATSLH IQPPGQNOH FSSAGLEWAR LVLAACSLCS120
SELLFLFPFT PAAIKAQTSS PKKKKKK                                     147

```

(2) INFORMATION ON SEQ ID NO. 193:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 150 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 193:

```

DILLALPECL DGLSPFLLVF APMDGYGLNP LEQQVLVDGV HVCLLLCKDE YRRGCLLQAL 60
EQVHHGLLLL HIFYLLDDIQ AGSPSAPHID GHRLYKGTLS KVLNLLRHGG TEEQGLSLAL120
EVGEDGTDVT LEAHVDHAVS LVQGQVATDV                                     150

```

(2) INFORMATION ON SEQ ID NO. 194:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 310 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 194:

```
EAPAAARTQS PAAAAQRGDN VYVVTEVLQT QKEVEVTRTH KREGSGRFSL PGATCLOGEG 60
QGHLSQKKTV TIPSGSTLAF RVAQLVIDSD LDVLLFPDKK QRTFQPPATG HKRSTSEGAW120
PQLPSGLSMM RCLHNFLTDG VPAEGAFTED FQGLRAEVET ISKELELLDR ELCQLLEGL180
EGVLRDQLAL RALEEALQGG QSLGPVEPLD GPAGAVLECL VLSSGMLVPE LAIPVVYLLG240
ALTMLSETQH KLLAEALSEQ TLLGPLELVG SLLEQSAPWQ ERRPCPCPPG SWGTAGAKEH300
RPGSCWTSVA                                     310
```

(2) INFORMATION ON SEQ ID NO. 195:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 244 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 195:

```
TTGIASSGTS IPEDNTRHSR TAPAGPSRGS TGPRLWPCSS ASSKARRASW SRSTPSRPSS 60
SSWHSSLSKS SSSLEMVSTS ARRPWKSSVN APSAGTPSVR KLWRHLIMER PEGSCGQAPS120
LVERLWPVAG GWKVLCLFSG KRRTSKSESI TSWATRNARV LPEGMVTVFF WLRWPWPSPC180
KHVAPGRENR PEPSRLWVRV TSTSFCVCST SVTTYTLSPR CAAAAGLCVL AAAGASHGAE240
SARC                                             244
```

(2) INFORMATION ON SEQ ID NO. 196:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 229 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 196:

```
TGHMATGLLA FLGLAAGGQT LCPAGELPGH ARAQASGAPG SVLIAVPGRR RVHTCGPGPA 60
APSTRGECPP PALGHTRPAR PRPVLLRPSC SPGARGAGTW SALLPRGTLL QEAAHQLERP120
QQGLRLQRLR QQLVLRFTQH GQCPQQVDNR DSEFRHQHSG GQHQALQDST CWTVQGLHRP180
KALALLQRL L QGSQGQLVPQ HPLQALQQQL AQLSVQKLQF LGDGLHLCP 229
```

(2) INFORMATION ON SEQ ID NO. 197:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 95 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 197:

```
TEILPVEFVRL AGVPICSTGN ASAMLQPQKP GLSLQQQAEP CLWSGAVHSS VCLVLGLELD60
RGGVSSPSLN SEQTLCLAPV CPGNSPGPHW EPLVF 95
```

(2) INFORMATION ON SEQ ID NO. 198:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 101 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 198:

```
AVPRGSLRED GKVRCMSNLL MAGSPLCPLS LALVIAELCA QCCGLAVARL FLWGARAGCG 60
NQSSQTDVSQ AEDSFLAEVS PHLQVSGWGG ARRGRHTPCL T 101
```

(2) INFORMATION ON SEQ ID NO. 199:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 155 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 199:

```
VRHTSHLAVL TQGAPGHCSC AAWALLLRTP RAPNEGLGNC LGTLGPGTGS VLNSGKVKRP 60
HLYPAQAQEQ GRQSCGQHPT TDTVLPAAGV RGLVSEAAW HWHCLCYRWG LLRVSQIQGE120
FQFTQPKGPV CRAALTRAQQ HSTELGKGRG ERVKD 155
```

(2) INFORMATION ON SEQ ID NO. 200:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 138 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 200:

```
RMKCSQPPRC HFQSDFOKCA PCPRAQTHWL EPPGRVQTIS SMRNAQKGFA DSIRLWRLPA 60
SGVGWVVSPP IQTQEVAPEG MYLVGSSSGT LGGCRALTQV FLSLSSLGCV CACACACLCF120
SLWAHQDAPR RACARVPT 138
```

(2) INFORMATION ON SEQ ID NO. 201:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 132 amino acids
 - (B) TYPE: Protein

(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 201:

VHGREARLGT LAGTAALKPA LLSGYQTFKG QDVLRRVPVA ARRPAGACPR VTAWRCWGSG 60
HLPCLCQEG EAFEEASVLA ARSLSQLPG SCTGQGLIPC HAGPLEQVGW GWYVLSPQPW120
QPCPLGKVIS DL 132

(2) INFORMATION ON SEQ ID NO. 202:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 131 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 202:

RLFIGCSLQN KQRWDWGPSL GPCTPLSRAY NHVHRPGRGP ALCPTKSSLH QSSWSPPLRD 60
PAQLPRSWG I GTRVPEWRVQE MRRIPCTLRR TPTPELWSRG HCERRQERH VEDTLTDPVG120
SGRAEDRHTK P 131

(2) INFORMATION ON SEQ ID NO. 203:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 76 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 203:

LAAIKDQLEG VQQALSQAAP IPEEDTDTEE GDDFELLDQS ELDQIESELG LTQDQEAQ60
QNKKSSGFLS NLLGGH 76

(2) INFORMATION ON SEQ ID NO. 204:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 102 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 204:

RVCSKHFLRL PPSQKRTQTL KKVMTLNYLT SQSWIKLRVN WDLHKTRKQK HSKIRSLQVS 60
FQICWEAINL GISLQQSTKN TTKISNKKKK KKRKRKKLNC KL 102

(2) INFORMATION ON SEQ ID NO. 205:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 80 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 205:

ICLHHNHCLC DTQLLAFYGL IPPTARLEMA VNGACFFTNK PKSTTAEITW KRFSLSRVLK60
YTFKFFPKKL ILIVPKSFN 80

(2) INFORMATION ON SEQ ID NO. 206:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 76 amino acids

- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 206:

GKPAALEAHQ GSRLOGRSRE QAAIPPLLSS RTQLCGLGFL FAGLAPCRTL VLELEGPILP60
RGDSQGCIRGI GWRRVL 76

(2) INFORMATION ON SEQ ID NO. 207:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 72 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 207:

NLRVSQLPWK PTRAPDCREE AGSRQPYLHS CPQGLSCVAL DFFLRDLRPA GHWCWSWRVL60
SCPGVTPRVA GG 72

(2) INFORMATION ON SEQ ID NO. 208:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 73 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 208:

PGMSSLQDRH GRTIWFQVGP YCSHRQRPQE ADGWKRGVTI TGVVMLRVCL DPPRTTLFLR60
 VTPLPSHASQ GCS 73

(2) INFORMATION ON SEQ ID NO. 209:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 182 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 209:

QRWLWTSSTS PCWIRAFLLP AGQVWPCSLG RAPAPLTTLO LTMQLMPKLW CPVCSSPGSH 60
 CHLQRGSLLR PTLHLAPPW LLAWPNLAFC AMLELELLF FRGGNRVESG KGLAPKCCCC120
 GFFAFSKDAL PGPKLQTAVL SKQVRS LGFG AHL LSGSISI LLLATSGQRP PQPHIARCWQ180
 KG 182

(2) INFORMATION ON SEQ ID NO. 210:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 130 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 210:

VGPGKQPWWG QVKQCGSQQG TPLKVAVAPR AAAHWTPQLW HQLHGELQSG QRGWGPAKRA 60
 RPDLPGRQE GPDARRSRG SPQPPLLLIA TGTSGDRLCS WESRSPGFVG LPAGDRHVSH120
 RERPGSRPQL 130

(2) INFORMATION ON SEQ ID NO. 211:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 111 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 211:

VTGKGRDPGL SCSSSWKRWs RTVTIHADTE QQYETEQLRA VSSSAEAAWA ATPPFCNHMP 60
 MSPPHLTSRW GWMAEQMKPA LWRGSLTEMH TFMGEVDGHL TSLMFHTVDC T 111

(2) INFORMATION ON SEQ ID NO. 212:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 243 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 212:

DVQVAGPEPD CRVHSHVLPQ QAHRLAPGPY SVGESLQPRE GCEDCDRQKA NLRIRFKPSL 60
 FQHVGTSSSL AGKIQKLKDK DFGKQALRKE HVNPPAEVST SLKTYQHFTL EKAYLREDF120
 WAFTPAAGDF IRFRFFQPLR LERFFFRSGN IEHPEDKLFN TSVEVLPEFN PQSDKEALQE180
 GRTATLRYPR SPDGYLQIGS FYKGVAEGEV DPAFGPLEAL RLSIQTDSPV WWILSEIFLK240
 KAD 243

(2) INFORMATION ON SEQ ID NO. 213:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 244 amino acids
 - (B) TYPE: Protein

(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 213:

GRTGVSVMVG IPSVRREVHS YLTDTLHSLI SELSPQEKED SVIVVLIAET DSQYTSVTE 60
NIKALFPTEI HSGLLLEVISP SPHFYPDFSR LRESFGDPKE RVRWRKQNL DYCFLMMYAQ120
SKGIYYVQLE DDIVAKPNYL STMKNFALQQ PSEDWMILEF SQLGFIGKMF KSLDLSLIVE180
FILMFYRDKP IDWLLDHILW VKVCNPEKDA KTVTGRKPTC GSASNRPSSS TWALTPRWLA240
RSRN 244

(2) INFORMATION ON SEQ ID NO. 214:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 210 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 214:

PAESQPADPL QTVPLPARGH SLLAGWQDPE TEGQRLWKAG AAEGACEPAS RGEHEPEDIP 60
ALHPGESLPA RGLLLGLHPC RGGLHPLPLL PTSKTGAVLL PQWEHRAPGG QALQHVCGGA120
ALRQPSVRQG GPAGGPHRHP PVFSEPRRLP PDRLLLQSGS RGRGGPSLRP SGSTAPLDPD180
GLPCVGDSE DLPEKGRSLSC GLLRVPCGQP 210

(2) INFORMATION ON SEQ ID NO. 215:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 128 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 215:

GGAGLVHGS A DWPC LAPWRV SSCFLPGTEL RGLGAPGAKS RLWCRGGGSL LNRHPEVLLR 60
CWVHP EWHGE QLWPFVLLPRP VLGKLSSGPS LQRPRMGWVW GTHGEWPEEL RVKRAPVCWL120
QRP GAPLS 128

(2) INFORMATION ON SEQ ID NO. 216:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 124 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 216:

FPQDWPRKEH RPQLLPVPLR VDPASQEHLR VSVKRQASTP APEPALSSRC PQTPQLCARQ 60
EAARHTPGRQ ARPVRGPMDK PSPASGKTGP FPTGHAPELW QIAGAIVWGE FNKSPFENEK120
KKKK 124

(2) INFORMATION ON SEQ ID NO. 217:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 142 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 217:

VPHTHPILGL CKEGPELSFP RTGLGRSTGH SCSPCHSGWT QHLRSTSGCR LRDRPPPLHQ 60
 SLLAPGAPR PRSSVPGKKQ LDTRQGAHKG QSADPWTSPA PPQKGQGLSL QDTPQSCGRL120
 QEPSCGENLI KALLKMKKKK KK 142

(2) INFORMATION ON SEQ ID NO. 218:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 379 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 218:

RRGLEGFNGG WTEMPGILWM EPTQPPDFAL AYRPSFPEDR EPQIPYPEPT WPPPLSAPRV 60
 PYHSSVLSVT RPYVVSATHP TLPSAHQPPV IPATHPALSR DHQIPVIAAN YPDLPAYQF120
 GILSVSHSAQ PPAHQPPMIS TKYPELFPAH QSPMFPDTRV AGTQTTTHLP GIPPNHAPLV180
 TTLGAQRPPQ APDALVLRTO ATQLPIIPTA QPSLTTSRS PVSPAQISV PAATQPAALP240
 TLLPSQSPTN QTSPISPHTP HSKAPQIPRE DGSPKALW LPSPAPTAAP TALGEAGLAE300
 HSQRDDRLL VALLVPTCVF LVVLLALGIV YCTRCGPHAP NKRTDCYRW VIHAGSKSPT360
 EPMPPRGS LT GVQTCRTSV 379

(2) INFORMATION ON SEQ ID NO. 219:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 157 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 219:

VDTDECQIAG VCQQMCVNYV GGFECYCSEG HELEADGISC SPAGAMGAQG SQDLGDELLO 60
 DGEDEEDEDE AWKASTVAGR RCLGSCGWSL RSRLTLPWPI DRASQRTESH RYPTRSPPGH120
 PRSVPPGSPT TPQCSPSPGL WWSLPRIPHC LLPTSLL 157

(2) INFORMATION ON SEQ ID NO. 220:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 211 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 220:

PPPPGPLCLL PIKSLCLLPP SPQSPPPSCP LRAPLTRPHP SALHIPKPKP PKSQGKMAPV 60
 PSWPCGCPHQ LPQQFQQFWG RLVLPSTARG MTGGCWWHSW CQRVSFWWSC LHWASCTAPA120
 VAPMHPTSAS LTAIAGSSML GARAQONPCP PGAASQGCRP AEPACDGVQT PLMEYGALDT180
 WPGLHQGPMG AAQLDRWLPA PQAQPGSSLN H 211

(2) INFORMATION ON SEQ ID NO. 221:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 117 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 221:

LGE PQISGAQ PGRVWGQLCQ STSQAHPPLG MPWDHGQGR L WGSETPLLST PSQNTLRVSG 60
 LWREWGGRAKN WHLPREGDER FALILREASE KCFKVCVMRQ AVSGGGLSSP LPPSF PK 117

(2) INFORMATION ON SEQ ID NO. 222:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 198 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 222:

NKELSSSLKSS DVVMTHTESC ITVASRATHL FGLSDGHSFT TQQQTPHTGT RMSASTWEAV 60
 AEPGRWPQPD HGLSGAGHQG VRVPMLPQGV GMTGRSLVTR QWTSLGEGWR ERAGQAPAAH120
 RLAHANTLKA LLGGFSENQG EALVSFPRKV PILPPAPLSP EPRDPQGVLA GGAKQRCCLRP180
 PEPSLPMIPR HARQGVGL 198

(2) INFORMATION ON SEQ ID NO. 223:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 98 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 223:

SHGMPGRGWA CEVDWHSCPH TLPGWAPFIW GSPSQHGVLG ACPGPFTRTE APHPLSHFSR60
 WKTQRRKRPW GGVPSCLQLA PWVPLCGGSP DSISSASE 98

(2) INFORMATION ON SEQ ID NO. 224:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 298 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 224:

ATRRRAAEAG MAAVLQRVER LSNRVVRVLG CNPGPMTLQG TNTYLVGTGP RRILIDTGEP 60
 AIPEYISCLK QALTEFNDAI QEIVVTHWHR DHSGGIGDIC KSINNDTTYC IKKLPRNPQR120
 EEIIGNGEQQ YVYLKDG DVI KTEGATLRVL YTPGHTDDHM ALLLEENAI FSGDCILGEG180
 TTVFEDLYDY MNSLKELLKI KADIIYPGHG PVIHNAEAKI QQYISHRNIR EQQILTFLFRE240
 NFEKSFTVME LVKIIYKNTF ENLHEMAKHN LLLHLKKLEK EGKIFSNTDP DKKWKAHL 298

(2) INFORMATION ON SEQ ID NO. 225:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 58 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 225:

GFSWGRSPLG RCWCLGGSWD PGYSPHARL DWTAARRAAV QQFFPPQPPA GVSPIWIL 58

(2) INFORMATION ON SEQ ID NO. 226:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 73 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 226:

SGSLSLNHIS IFQINILLLS ISYNFFSLRI PWEFFNAIGS VIIDAFTNIS YASRMISVPV60
SHYNFLDCCV KFS 73

(2) INFORMATION ON SEQ ID NO. 227:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 141 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 227:

AFLLRPSVTA STRLLPVCAS PRSSPGPSA QQQQAWQQAW SSARAPSRCR ARPSSSERPC 60
PAVGRLASLY CCCMVFASPP RPGRTWVHCT GWPRLATGLW PLTCQVWGTP RKQQPLPLL120
SWPLAASWRL WWMPWSWAPR L 141

(2) INFORMATION ON SEQ ID NO. 228:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 244 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 228:

VPPPALGHRQ HAPASRLRES TQLPRPFTST AAAGMAASVE QREGTIQVQG QALFFREALP 60
GSGQARFSVL LLHGIRFSSE TWQNLGTLHR LAQAGYRAVA IDLPGLGHSK EAAAPAPIGE120
LAPGSFLAAV VDALELGPPV VISPSLSGMY SLPFLTAPGS QLPGFVPVAP ICTDKINAAN180
YASVKTPALI VYGDQDPMGQ TSFEHLKQLP NHRVLMKGA GHPCYLDKPE EWHTGLLDL240
QGLQ 244

(2) INFORMATION ON SEQ ID NO. 229:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 144 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 229:

WTDHNRGAQL QGIHHSRQEA ARGQLPNRGR GCCFLGVPQT WQVNGHSPVA SLGQPVQCTQ 60
 VLPGLGGEAN TMQQQYREAS LPTAGQGLSE EEGLALHLDG ALALLHACCH ACCCCAGEGP120
 GELRGLAQTG SRRVLAVTEG RRRN 144

(2) INFORMATION ON SEQ ID NO. 230:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 135 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 230:

LEFFIPCLGS VNEACLFPGV SFHGLYFSSS SGSFAGSSLW KLHERWLGLG FAGVYSRVKA 60
 EWDLRPRLGT TQAEKGRFHH SQCPHSTTS ARAPPSLLPH PAIVRGATVG RRVPRRGLFL120
 LPVPEKAFPL LKFKH 135

(2) INFORMATION ON SEQ ID NO. 231:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 96 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 231:

GGPVCWEPQV TPFSSYSVPG ASCPPLQILG KENVYVAGYC MVTSEGRPLG THLPTAAQAR60
AQAHLLVLRP QIKPSPHHMA SDRFLPSRKF CGCAVL 96

(2) INFORMATION ON SEQ ID NO. 232:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 83 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 232:

CCGEGTVNDG NVPSQPGSCL TWVSNPTLPS PWSTLQRSRG PANAREVSTE KSLQNSHWKR60
RNKGHGKKPQ GRDRPRSQTL GRE 83

(2) INFORMATION ON SEQ ID NO. 233:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 52 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 233:

ASPASLAQAT SRQPAPSPRA RSHLATSTSW TSSARSDAGC GECRRDPGAP PR 52

(2) INFORMATION ON SEQ ID NO. 234:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 94 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 234:

LGSWQQLRR PEASETLRLV GTHRPRQAL PRQVASPPP RRLGLTSPE VRLGQVVPGL60
 MPGVSAAGT QVRRLEVPAL SLRLQHLQL REGL 94

(2) INFORMATION ON SEQ ID NO. 235:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 95 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 235:

ARPSRSWRWC CSRSDAGTSS RRRTWVPAAL TTPGIRPGTT CPRRTGGEVR PSPRRGGGLA60
 TRCLGKARWR GLCVPTSRRV SDASGRRSCC QAEPR 95

(2) INFORMATION ON SEQ ID NO. 236:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 174 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 236:

APTNRSSSK FATSGSPGYP IASSGASPEV RQRRTTFFRF RPPGESLCGDM KLLTHNLLSS 60
HVRGVGSRGF PLRLQATEVR ICPVEFNPNF VARMIPKVEW SAFLEAADNL RLIQVPKGPV120
EGYEENEEFL RTMHLLLEV EVIEGTLCQP ESGRMFPISR GIPNMLLSEE ETES 174

(2) INFORMATION ON SEQ ID NO. 237:

- (i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 225 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 237:

YRAQKHCVWC HWVKGWGYTR QNSETGYRST KIHSHNKKNW RLAQSTLSFL FTQQHVGDPA 60
ADGEHTSRFR ALQGALYHEH LQQQVWHGPQ KLLILLISLN RPFRLDQTQ VIGRLQERRP120
LHFRYHTRHE VGVEFHRA DT DLGGLEAQGE ATGPHPPHMR AQQIVGKQFH VAAQTLARPE180
PEKGRPPLPH FRGCSTRCYW IARRTGSGEL AGTSRVCSS FLYAN 225

(2) INFORMATION ON SEQ ID NO. 238:

- (i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 209 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 238:

TFNEKKIYNT ELKNTVEGVI GSRVGDTHGR IRKQGIDQQK YTVITRKTGA WHNQLSVSSS 60
LSSMLGIPRL MGNIRPDGSH CRVPSITSTS SSRWCMVLRN SSFSSYPSTG PFGTWIRRK120
SAASRNADHS TLGIIRATKL GLNSTGQIRT SVAWRRRGKP RDPTPRTCEL SRLWVSSFMS180
PHKLSPPGRN KKVVLRCLTS GDAPLDAIG 209

(2) INFORMATION ON SEQ ID NO. 239:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 146 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 239:

INAFSHRNAK ININPPDAVA AALRPKSQRP RLTIKVFSE SVGVSVNGCA LGGTVERCAK 60
 SELQTIGQGH GVATRRRLSA GAPPRTHSQQ SSHWHEELKNK HLQGRGKRPR SRRSRARASA120
 ARGAPTGSQR GGSPKRARSG RSRVLA 146

(2) INFORMATION ON SEQ ID NO. 240:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 134 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 240:

SRTFSFLSFL HCANILTLFV SFQEPHRHIQ VKRSLNKCLQ PSQCKNKYQS SRRSSSRAAP 60
 KVPTATPNKY KSVQRECVRE CEWVCAGGHG GAVCKIGVAN HRTRAWSGYP PPTQRGRASP120
 HTLTAEFALG RVKK 134

(2) INFORMATION ON SEQ ID NO. 241:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 147 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 241:

PARTRDRELL ARFGLPPRCE PVGAPLAALA LARERRERGR FPRPCKCLFF NSSQCELCCE 60
CVRGGAPALS RRRVATPCPC PMVCNSDFAH RSTVPPSAHP FTLTPTLSLN TFIIVRRGRW120
DFGRSAAATA SGGLIFIFAL RWLKAFI 147

(2) INFORMATION ON SEQ ID NO. 242:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 88 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 242:

PVLCRGNSSGS LSRKFPPKPQ KPADKDHPT CVYLENRSPG KSDLSATPGR SGLESGYQNL60
LRQHQPGRGRC PTWPGSRWKV PRRFPGYG 88

(2) INFORMATION ON SEQ ID NO. 243:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 164 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 243:

QDGCPSGDF AALQSLLKAS SKDVVRQLCQ ESFSSSALGL KKLLDVTCS LSVTQEEAAE 60
LLQALHRLTR LVAFRDLSSA EAILALFEN FHQNLKNLLT KIILEHVSTW RTEAQANQIS120
LPRLVDLDWR VDIKTSSDSI SRMAVAPPGL VPDGRFQGGG QAMG 164

(2) INFORMATION ON SEQ ID NO. 244:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 87 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 244:

FAWASVLQVD TCSRMIFVSR FLRFWWKFSG KRARIASAED RSRNATSLVR RCRAWSSSSA60
SSWVTDKLEH VTSKSFFKPR AELEKLS 87

(2) INFORMATION ON SEQ ID NO. 245:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 129 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 245:

DGPGGPTAHP HRCAPPGVC PGQAPAHLLL CAAAPGHGPGQ GQPPAAGGLV GDADRAGDLE 60
CSPRRIFLHP RLHPPRHLGS CHLDRGCGCA GWSCCLHLRE TGWYILGPAE DSASAGSFLH120
SHRCPQTLE 129

(2) INFORMATION ON SEQ ID NO. 246:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 268 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 246:

```
ASPSNSQPTS PASAPALPPP ARSRGAQTV SLTMGTADSD EMAPEAPQHT HIDVHIHQES 60
ALAKLLLLTCC SALRPRATQA RGSSRLLVAS WVMQIVLGIL SAVLGGFFYI RDTLLVTSG120
AAIWTGAVAV LAGAAFIYE KRGGTYWALL RTLLALAAFS TAIAALKLWN EDFRYGYSYY180
NSACRISSSS DWNTPTPTQS PEEVRLHLC TSFMDMLKAL FRTLQAMLLG VWILLLLASL240
APLWLYCWRM FPTKGKRDQK EMLEVSGI 268
```

(2) INFORMATION ON SEQ ID NO. 247:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 103 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 247:

```
DCTQDPQHDL HHPRGHQPPA AAPGLGGPGP QRRAGEQEL GQGRLLVDVH IDVGVLWGLR 60
GHLITVGCSH CQGHSLRSSG PASGRREGWG AGWRSGLRVG GGG 103
```

(2) INFORMATION ON SEQ ID NO. 248:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 86 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 248:

GSRRRDGGGA GAAPVAPRAL GRRARAGRCS EDEGGGGAQR VWGEQPVLAS GQSPPGQEGS60
 FTRVWTRASL PTLGQVLQPG GVHVQV 86

(2) INFORMATION ON SEQ ID NO. 249:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 154 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 249:

ARGGAMAAGL ARLLLLLGLS AGGPAPAGAA KMKVVEEPNA FGVNNPFLPQ ASRLQAKRDP 60
 SPVSGPVHLF RLSGKCFSLV ESTYKYEFCP FHNVTQHEQT FRWNAYSGIL GIWHEWEIAN120
 NTFTGMWMRD GDDCRSRSRQ SKVELACASP SNCV 154

(2) INFORMATION ON SEQ ID NO. 250:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 95 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 250:

PLDAVARART RQLHLALPAP GTAVVTVPHP HAREGVVGD L PLVPDAEDPT VGVPAEGLLV60
 LGHVVERAEL ILVRGLHQAE ALARESEEMH GSRHG 95

(2) INFORMATION ON SEQ ID NO. 251:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 240 amino acids
- (B) TYPE: Protein

(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 251:

KVTDGHTRTP RSGVPRQHEA GSPGLTASHA MSIHLAGSLT AMDSICASER SQGVWRAPTP 60
GCQGLSPGPR PGELPGGSSP EERLGRLAVA GPPRGAQNVQ QAGPEAEAPP LRFGHAWGAQ120
TPRLGAPGPW TPLPTLPISH PPFWSQTPAQ RKEGFTEEGQ GRAWPQGGDE DISGPGSCRL180
LWEEPCVCK LLGLAARPTA GPSLDPCTWP SSCPLAAPGL GTGIEPRGLG WLQQRDREG240

(2) INFORMATION ON SEQ ID NO. 252:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 216 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 252:

GLVMPGELRR PGLGPQAHGL PSPLCPPIFP LFGPRHQHKE RRGSRQKARA EPGPREGMRT 60
FPVQVAAGCS GRKSHASVNC WGWPRAPLQG PALTPARGHP AALWLPLALA QASSLEGWAG120
WARAGTGRGS TSDPDVGWLC PPRREAQTS YTKAKSTIGE PRSHFMGRRP RPQGPQSKAR180
GRFIPEDSPP GAAPAWGGVS RPLGCLSVCG TPWSTP 216

(2) INFORMATION ON SEQ ID NO. 253:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 218 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 253:

VLRLLYIYIL YITNMKWFST QPLWLNTKQR SHRRGPGPPP APLSGVLGSR GLPHHPSQGW 60
GRAGPRAGAN VAWNSNCIVR WVGGQWARGC SQPGPFTTNL AMTCGGPWGS GCLLGSTLSE120
VSPWAPPSCP QGHPVLPTLRL WAWGLQDPLC RVRVGAGHGS RHQPDAPGVV ARSWDGVVRN180
TAPKTQNKNT TNGRRSPPT EVGFEPPLIF PVSFLQPW 218

(2) INFORMATION ON SEQ ID NO. 254:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 79 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 254:

RDGGGAGAAP VAPRALGRRA RAGRCSEDEG GGAQRVWVS SLAGWRLERG TARARSPLTL60
PLPVGGTTRS CLRFPVASRP 79

(2) INFORMATION ON SEQ ID NO. 255:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 79 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 255:

LGLEATGLRQ ERVVPPTGSG KVSGERARAV PRSSRQPARL LTQTRWAPPP PSSSLHLPAR60
ARRPRARGAT GAAPAPPPS 79

(2) INFORMATION ON SEQ ID NO. 256:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 79 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 256:

WPGGDWPEAR TGCSTYGKRQ GQRGTGPGRP PLEPPAREAA HPNALGSSTT FIFAAPAGAG60
PPAESPRSNR SRASPAAIA 79

(2) INFORMATION ON SEQ ID NO. 257:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 51 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 257:

GHLGGPTGSV CSRILLASSP FYMNCCINKH RVPETTEVII LPTECWPGQA W 51

(2) INFORMATION ON SEQ ID NO. 258:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 49 amino acids
- (B) TYPE: Protein

(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 258:

GGGFLGQIDK SKDNISLVTV IQLHSYTVAL FGLSHEEVLV TNYVFGCF

49

(2) INFORMATION ON SEQ ID NO. 259:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 48 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 259:

AFTRNTTNKV SDMLANQARL RSLRRPNWLC LLKDSSGLVS ILHELLHK

48

(2) INFORMATION ON SEQ ID NO. 260:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 179 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 260:

PGISVSVDKM ESSPFNRRQW TSLSLRVTA ELVLNKNKS SAIVEIFSKY QKAAEETNME 60
KKRSNTENLS QHFRKGTTLV LKKKWNPG L GAESHTDSL R NSSTEIRHRA DHPPAEVTSH120
AASGAKADQE EQIHPRSLR SPPEALVQGR YPHIKDGEDL KDHSTESK KM ENCLGESRH 179

(2) INFORMATION ON SEQ ID NO. 261:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 56 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 261:

QATLLLEPKL TKKNKSTPDL DSGHLLKPSF RVDIPTSRTV RILKTTQQKV KKWKIV 56

(2) INFORMATION ON SEQ ID NO. 262:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 94 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 262:

DSAPSPGFSSH FFFENTVRVPF LKCWERFSVL LLFFSMFVSS AAFWYLENIS TIADDLFLLT60
RESSLAVTLN DSEVHCRLLN GDSILSTDT EIPG 94

(2) INFORMATION ON SEQ ID NO. 263:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 75 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 263:

VMSPADKAA RADSARAARG KRKNVEENM AYSALMEVAG YCLIERMLWN PMLKIKSVWL60
CSYAVMVIPR QLAKV 75

(2) INFORMATION ON SEQ ID NO. 264:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 74 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 264:

AMFSSTFFFL LPRAARAESA RAALSAGSLI TYAFYKRLPK KKLLTRNVOK PLKANKQQT60
VFAFSYSWQA EVRA 74

(2) INFORMATION ON SEQ ID NO. 265:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 63 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 265:

DSKAFSLLSS NQPLPSKLSR PCFPPHFFFF YLEPLEPNRL EPPCLLDHSS PTHFIKGYPK60
RNC 63

(2) INFORMATION ON SEQ ID NO. 266:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 94 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 266:

RRGSGSRSSM APVLASMLWM STRGTAMTST SLCTSRARSR PMPSSSSPTP TAWRCCCATR60
 TRVSTSTRTG ASLRMWCCSG GRCLLLWPTS APTR 94

(2) INFORMATION ON SEQ ID NO. 267:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 254 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 267:

GDRKPLYHYG RGMNPADKPA WAREVKERTR MNKQQNSPLA KSKPGSTGPE PPSPQASPGP 60
 PGLPWAPKPY HKFMAFKSFA DLPHRPLLVD LTVEEGQRLK VIYGSSAGFH AVDVDGNSY120
 DIYIPVHIQS QITPHAIIFL PNTDGMEMLL CYEDEGVYVN TYGRIIKDVV LOWGEMPTSV180
 AYICSNQIMG WGEKAIEIRS VETGHLDGVE MHKRAQRLKF LCERNDKVFF ASVRSGGSSQ240
 VYFMTLNRNC IMNW 254

(2) INFORMATION ON SEQ ID NO. 268:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 231 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 268:

```
GKKHLVIPLT QELEPLSSFV HEDPVEVARL HRA DLNGFLT PAHYLVGADV GHRSRHLPPL 60
QHHLNDAPV RVDVDTLVLV AQQHLHAVGV GEEDDGMGRD LALDVHRDVD VIAVPRVDIH120
SMEASTGAID DLEPLPLLYC QVDQQRAGE VGKGLEGEHF VVGFGGPGEA WGPWGGLGAG180
GLRPRAAWLA LGQGRVLLLH HPCSLEYLSG PGWVFSGIHA PTIMVQGLPV P 231
```

(2) INFORMATION ON SEQ ID NO. 269:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 454 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 269:

```
GAGCTSPGLW ARKAAARCLP TYPSTRAQPSN VGRRRRRRPG LGALAAGVPA MAESVERLQQ 60
RVQELERELA QERSLQVPRS GDGGGGGRVRI EKMSSEVVDS NPYSRLMALK RMGIVSDYEK120
IRTFAVAIVG VGGVGSVTAE MLTRCGIGKL LLFDYDKVEL ANMNRLFFQP HQAGLSKVQA180
AEHTLRNINP DVLFEVHNYN ITTVENFQHF MDRISNGGLE EGKPVDLVLS CVDNFEARMT240
INTACNELGQ TWMSGVSEN AVSGHIQLII PGESACFACA PPLVVAANID EKTILKREGVC300
AASLPTTMGV VAGILVQNVL KFLNFGTVS FYLGYNAMQD FFPTMSMKPN PQCDNRNCRK360
QEEYKKKVA ALPKQEVIOE EEEIHEDNE WGIELVSEVS EEELKNFSGP VPDLP EGITV420
AYTIPKKQED SVTELTVEDS GESLEDLMK MKNM 454
```

(2) INFORMATION ON SEQ ID NO. 270:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 123 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 270:

KLTVPKFNRN FNTFCTKIPA TTPIVVGRLA AQTPSRFRVF SSIFAATTSG GAHAKQADSP 60
GIISCICPET AFSLTPDSIH VCPSSLQAVF IVIRASKLST QLRTRSTGFP SSNPPLLILS120
MKC 123

(2) INFORMATION ON SEQ ID NO. 271:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 176 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 271:

CSSEYVLLLE LYLILLDEVG RKVYSYWLVP PCHNQRVATY QCHILSAFQQ SHYLLHQHLL 60
LLRQRYGFSH SRLQFPFVSM PSSGCRDSP PPLSSSSRCG PGRPLRRRSS GPADSSPGQV120
PAPAPGPAAG GAPQTPPWLG LRPPTLPARA FAAAFAPRCS AGPARGTWGG TSPLPS 176

(2) INFORMATION ON SEQ ID NO. 272:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 117 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 272:

EARQAWTGAK GAGSLTFSSL QSGHLASGSQ SPESTKAPGT PPTPSYPGTP SRQLLWQWVQ 60
PRPALPASSP CSRHQLYLPR QAMSWLLSPA PSVPLDFSGA SPVWATLCFP HPRLPHR 117

(2) INFORMATION ON SEQ ID NO. 273:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 86 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 273:

APALPPPAGN VLASQPSTIC SPRLLRGQPS LGHPLFPSSS APTQVTDPAD SFSLGKVGCC60
LTSPSSPPPI HTHRHPPTPG RLVSHM 86

(2) INFORMATION ON SEQ ID NO. 274:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 177 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 274:

EARTLPAGGG RAGAYCRERR LAVLAWAGPT AITVAYLGSL GRMEWVCQG LWCFLVIGTL 60
MPSAHFAKKK KLMTLLPWLL SMLAWPPRVG GTSPLLAEAG EQVLSYDPIH QAGVLSPSGH120
HSSQHQPVG LGQGSEKGWQ EVPRSSQPGR GTNALNTSKL RDPKVSTPGS GLPPHRH 177

(2) INFORMATION ON SEQ ID NO. 275:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 71 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 275:

QFPGPSVPEQ STSVSVTTSC LFPSLHLLQF IYMLLLLHVH CLPYQAVNEG RNLVCFIH60
VPSAWHIVGL H 71

(2) INFORMATION ON SEQ ID NO. 276:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 102 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 276:

FFFFFFFF FFFCLINMSI YLAPDGNTKS WQWEWKGSLS QILPYYVDPK AGLGSKAHKP 60
PKQIFIEHLD YYRPSILLGT MGDVKEVISH MICLQAKNA SG 102

(2) INFORMATION ON SEQ ID NO. 277:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 65 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
(A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 277:

GVIESRRVLS RGVIRFIFKQ PNPGRCGPIL SALKKIPFPY LPASIMSVEE SNCGSFEGDG60
PFFPV 65

- (2) INFORMATION ON SEQ ID NO. 278:

- (i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 65 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
(A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 278:

FFFFFFFFFF FFLNKYEHL FGTRWQYKIL AVGVERFSL NTSILCRPKG RTWQGSQTT60
QTNIY 65

- (2) INFORMATION ON SEQ ID NO. 279:

- (i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 489 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
(A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 279:

LADSFPGSSP YEGYNYGSFE NVSGSTDGLV DSAGTGDLSG GYQGRSFEPV GTRPRVDSMS 60
SVEEDDYDTL TDIDSDKNVI RTKQYLYVAD LARKDKRVLR KKYQIYFJNI ATIAVFYALP120
VVQLVITYQT VVNVTGNQDI CYYNFLCAHP LGNLSAFNNI LSNLGYILLG LLFLLIILQR180
EINHNRALLR NDLCALECGI PKHFGLFYAM GTALMMEGLL SACDHVCPNY TNFQFDTSEFM240
YMIAGLCMLK LYQKRHPDIN ASAYSAYACL AIVIFFSVLG VVFGKGNTAF WIVFSIIHII300
ATLLLSTQLY YMGRWKLDG IFRRILHVLY TDCIRQCSGP LYVDRMVLLV MGNVINWSLA360
AYGLIMRPND FASYLLAIGI CNLLLYFAFY IIMKLRSGER IKLIPLLCIV CTSVVWGFAL420
FFFFQGLSTW QKTPAESREH NRDCILLDF DDHDIWHFLS SIAMFGSFLV LLTDDDDLD480
VQRDKIYVF 489

(2) INFORMATION ON SEQ ID NO. 280:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 182 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 280:

```
APLCHRPVTL SCCGDESQHR CPALDGSRTA RSSLG LAWDS HGVAWNLAAA LCRGAGLLPW 60
DPQMLAKLLL SSQCWGLPWA PVLWLSICPF ARGRMEGTPS PFHALHFARP PPHNAPAWDL120
RPLFPFILPL QGLVWGLNLC PVSGPQFSLG CPWLPSLPIP VSQDGWGYEI LGVGQLVPDF180
WC 182
```

(2) INFORMATION ON SEQ ID NO. 281:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 536 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 281:

```
ARPGCPAAIQ CWA AVLGLIP TARQSDRSMT QRSSGPLEVK RRAQLLLEDI DLVPLHSIQV 60
VIQCQQHQEG PEHGDGGEEV PDVVVVKEVE EDAVPVVLPR LCRGFLPGAE SLEEEEEEREA120
PDHGGANDAE QGDELDPLPT PELHDDVEGE VKEQVADANG QQVGSEIIGA HDKPIGSQRP180
VDDVAHDQQH HAVHVERPAA LPDAVCVEHV EDAAEDPRVQ FPPAHVIELR AEEQGGDDVN240
DGEDOPERRV PFAKDHAQHR EEDDNGQAGV GTVGAGVDVR VPLLVELQHA ESGDHVHERC300
VKLEIGIVGA HMIASTEQPL HHQGCAHGVE KPKVFGDPTF QGTEVIAQQG PVVVDLPLQD360
DEQEKQPQOD VPQVAEDVVE GAETIAQWVGA EEVVVADVLI PCDIHHRLVG DHQLHHRKGI420
EDSNGGNVPE VDLVLFQNT LVLPCQVSHI EVLLGANDIL VGIDVGQCVV VILLHRAHGV480
HSGPSTYRFK GAALVTVREV PSASAVNQTI GRSRNILKGA IVVTLIRGTA RKRISQ 536
```


(2) INFORMATION ON SEQ ID NO. 282:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 551 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 282:

PLSSPSCCRY RRCRRRLRPP LRSVVQPGPR TMSLSRSEEM HRLTENVYKT IMEQFNPSLR 60
 NFIAMGKNEY KALAGVTYAA KGYFDALVKM GELASESQGS KELGDVLFQM AEVHRQIQNQ120
 LEEMLKSFHN ELLTQLEQKV ELDSRYLSAA LKKYQTEQRS KGDALDKCQA ELKKLRKKSQ180
 GSKNPQKYSYD KELQYIDAIK NKQGELENYV SDGYKTALTE ERRRECFLVE KQCAVAKNSA240
 AYHSKGKELL AQKLPLWQQA CADPSKIPER AVQLMQQVAS NGATLPSALS ASKSNLVISD300
 PIPGAKPLPV PPELAPFVGR MSAQESTPIM NGVTGPDGED YSPWADRKAA QPKSLSPQSQ360
 QSKLSDSYSN TLPVRKSVTP KNSYATTENK TLPRSSSMAA GLERNGRMRV KAIFSHAAGD420
 NSTLLSFKEG DLITLLVPEA RDGWHYGESE KTKMRGWFPF SYTRVLDSOG SDRLHMSLQQ480
 GKSSSTGNLL DKDDLAIPPP DYGAASRAFP AQTASGFKQR PYSVAVPAFS QGLDDYGARS540
 MSSADVEVAR F 551

(2) INFORMATION ON SEQ ID NO. 283:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 185 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 283:

AGEAAGQPGS PPSHQLAKCP PLTQGYPR LH GHVTRGVYPQ EAAPQPWAAQ PLGLALQGPA 60
 PHSARPCLEQ LGSSPGQTQV GQDQAAGAWM FSTQERTDDD RTGYMGRAGE ATRWAALQMW120
 PSAEEGGRPV VGHCRQLQDV GKGILTLVRR LRIWPLPHRR CSWTALHSHP GPGRRRAPH180
 CRASA 185

(2) INFORMATION ON SEQ ID NO. 284:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 518 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 284:

```

SGGSESGHFH IGAAHGPRSI VIQALGEGGH GHTVGPLLEA AGRLGGEGPG GGAVIGGWGDG 60
QVVLVQEVAR AAALPLLQAH VQPVTAIAVQ DPGVGEGKPA PHLGLLTLSV VPAIAGLRHQ120
QGNEVTLLA QEGAVVPSSV GEDGLHPHTA IALQAGCHGA RARQSLVLGG GIAVFWGHAL180
AHGECVGVGV AELALRLRRR QGFGLGSLAV SPRAVVLAIR ACDAVHDGCA LLGRHPPHER240
CQLGGHRQGL GPRNGVGNDQ VGLGGRQGAG EGGAVAGHLL HELHRALRDL AGVGTGLLPQ300
RQLLRQQLLA LGVVGRGVLG HGALLHQEA EAPALLCQCG LVAVGHVILQ LALLVADGVD360
VLQLLVRVLL RILAALALLP KLLQLSLTLV QGVAFAPLLS LVFLQRSTQI PGVQLHLLQ420
LRKQLVVKRL QHFFQLILD L PVDFFSHLEEN VSEFFGALAL AGQLPHLHQG VKVAFGCIRH480
TCQCLLVILP HGDEVPEARV ELLHDGLIDI FREPVHLL 518

```

(2) INFORMATION ON SEQ ID NO. 285:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 217 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 285:

```

VREAAARREQR YQEQQGEASP QRTWEQQQEV VSRNRNEQES AVHPREIFKQ KERAMSTTSI 60
SSPQPGKLRS PFLQKQLTQP ETHFGREPAA AISRPADLP AEPPAPSTPP CLVQAEAAV120
YEEPPEQETF YEQPPLVQQQ GAGSEHIDHH IQQGGLSGQG LCARALYDQ AADDTEISFD180
PENLITGIEV IDEGWWRGYG PDGHFGMFPA NYVELIE 217

```

(2) INFORMATION ON SEQ ID NO. 286:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 162 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 286:

```

AGASGRLWLP SAFICLFSFS LASKGWWPPL FRMTLGNSER REFLAEFVT KVRVDHGGLA 60
AGNLSCWSLL CAPHSISLSL CLGYGKWGCR WPSSHPGYSK TADTCSSTR LTRCLQAPVC120
ASTDSDFRKS NTEWPWPVVF PYFLSQLIRV SEEQICFWTK KK                      162
  
```

(2) INFORMATION ON SEQ ID NO. 287:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 173 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 287:

```

LLACRGWPGR RWHEELNSGK VMYAFCRVKD PNSGLPKFVL INWTGEGVND VRKGACASHV 60
STMASFLKGA HVTINARAE E DVEPECIMEK VAKASGANYS FHKESGRFQD VGPQAPVGSV120
YQKTNAVSEI KRVGKDSFWA KAEKEEENRR LEEKRRAEEA QRQWSRSAGS VSA          173
  
```

(2) INFORMATION ON SEQ ID NO. 288:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 597 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 288:

```

EKCGQYIQKG YSKLKIYNCE LENVAEFEGE TDFSOTFKLY RGKSDENEDP SVVGEFKGSF 60
RIYPLPDDPS VPAPPRQFRE LPDSVPQECT VRIYIVRGLE LQPQDNNGLC DPYIKITLGK120
KVIEDRDHYI PNTLNPVFGF MYELSCYLPQ EKDLKISVYD YDTFTRDEKV GETIIDLENR180
FLSRFGSHCG IPEEYCVSGV NTWRDQLRPT QLLQNVARFK GFPQPILSED GSRIYGGGRD240
YSLDEFEANK ILHQHLGAPE ERLALHILRT OGLVPEHVET RTLHSTFQPN ISQGKLQMWV300
DVFPKSLGPP GPPFNITPRK AKKYYLRVII WNTKDVLDE KSITGEEMSD IYVKGWIPGN360
EENKQKTDVH YRSLDGEENF NWRVFVFPDY LPAEQLCIVA KKEHFWSIDQ TEFRIIPRLI420
IQIWDNDKFS LDDYLGFELE DLRHTIIPAK SPEKCRDMI PDLKAMNPLK AKTASLFEQK480
SMKGWWPCYA EKDGARVMAG KVENTLEILN EKEADERPAG KGRDEPNMNP KLDLPNRPET540
SFLWFTNPCK TMKFIVWRRF KWVIIGLLFL LILLFVAVL LYSLPNYLSM KIVKPNV 597

```

(2) INFORMATION ON SEQ ID NO. 289:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 120 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 289:

```

DQHSCFKMSP DSKASHNPSF PKMGVESOME DETTAWMNLK PTKSCTSTSG PLKSGLLFTS 60
SGLRGWSLST WKQGLCTAPS SPTFPRENER CGWMFSPRVW GHQALLSTSH PGKPRNTTCV120

```

(2) INFORMATION ON SEQ ID NO. 290:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 289 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 290:

```
ETQVVIQRKL VIVPYLNDQP GWDSKFRLVN TPEMLFFRND TELFGWKVVK RENKSPVKIP 60
FTIQRSVMDI CFLFVFFIAR NPAFDVDVTH FLSCDAFLVQ DNVLGVPDDH TQVVFLGFPG120
CDVERRAWWP QTLGENIHPH LKFSLGNVGL EGAVQSPCFH VLRDQPLSPE DVKSKPLFRG180
PEVLVQDFVG FKFIQAVVSS SISDSTPIFG KDGLWEAFES GDILKQLCWS QLISPGIDSR240
NTVLLWYAAV GPKAGKESVF QINNCFSYFF IPGKGVIID RNFQVFFLR 289
```

(2) INFORMATION ON SEQ ID NO. 291:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 201 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 291:

```
GTGDGSKEIN IVWGIQVPIF HNGPWVSTNH PVARFPRI TS LASEGIIVPS TSTIRGMGVW 60
RASCGDCRAD STSSIAQDRG PGLTIGHQAL GSLVWVGESW GQTWGEYLGG PRWLGLDLR120
QSWALSISEE VVKKRDFLFH FLNFLCMLVE DMFAHKLRTL EFLATERTQP LILAQFLRVG180
GDELLHFLW VFAPHLLGLF L 201
```

(2) INFORMATION ON SEQ ID NO. 292:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 171 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 292:

```
SVIFFKIGFC EGRLVGRGGV PGSEAQSCVL SSSVWISLAA SLMSLRITCL CWVMPLMLRT 60
RRVRSLETPG LSSHRRRMF CRFQQISLML TLRSKVTQPR RKNLLSGWGS ESATRIKPGY120
LLQREMISAR EMLGAMLRMK REQVLCSGRG LHSSPAASLG FSHSSSLGFS F 171
```

(2) INFORMATION ON SEQ ID NO. 293:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 485 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 293:

EKEKPKEE EW EKP KDAAGLE CKPRPLHKTC SLFMRNIAPN ISRAEIISLC KRYPGFMRVA 60
 LSEPPERRF FRRGWVTFDR SVNKEICWN LQNI RLRECE LSPGVNRDLT RRVNRINGIT120
 QHKQIVRNDI KLAAKLIHTL DDRTQLWASE PGTPPLPTSL PSQNPILKNI TDYLIEEVSA180
 EEEELLGSSG GAPPEEPPKE GNPAEINVER DEKLIKVL DK LLLYL RIVHS LDYYNTCEYP240
 NEDEMPNRCG I IHVRGPMPP NRISHGEVLE WQKTFEEKLT PLLSVRESLS EEEAQKMGRK300
 DPEQEVEKFV TSNTQELGKD KWLCPLSGKK FKGPEFVRKH IFNKHAEKIE EVKKEVAFFN360
 NFLTDAKRPA LPEIKPAQPP GPAQILPPGL TPGLPYPHQT PQGLMPYGQP RPPILGYGAG420
 AVRPAVPTGG PPYPHAPYGA GRGNYDAFRG QGGYPGKPRN RMVRGDPRAI VEYRDL DAPD480
 DVDFF 485

(2) INFORMATION ON SEQ ID NO. 294:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 368 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 294:

ESSGFQAIGR AEDDARSCWV KTSESTRPYQ LLRRRRPTLI TYRIFRHHRRH KDTSSGDHLT 60
 CRLDPPQAKDL KDGTQEEATK RQEAPVDPRP EGDPQRTVIS WRGAVIEPEQ GTELPSRRAE120
 VPTKPEPLPPA RTQGTPVHLN YRQKGVIDVF LHAWKGYRKF AWGHDELKPV SRSFSEWFGL180
 GLTLIDALDT MWILGLRKEF EEARKWVSKK LHFEKDVDVN LFESTIRILG GLLSAYHLSG240
 DSLFLRKAED FGNRLMPAFR TPSKIPYSDV NIGTGVAHPP RWTSDSTVAE VTSIQLEFRE300
 LSRLTGDKKF QEAVEKVTQH IHGLSGKKDG LVPMFINTHS GPVSPTWGVF HGGAPGADSL360
 LLSYLFER 368

(2) INFORMATION ON SEQ ID NO. 295:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 94 amino acids
 (B) TYPE: Protein

(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 295:

ALRSPPRMRI VLSNRLTSTS FSKCNFFDTH FLASSNSFLR PKIHMVSSAS ISVRPRPNHS60
LKDLDTGFSS SWPHANLRYP FHACRKTSIT PFWR 94

(2) INFORMATION ON SEQ ID NO. 296:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 94 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 296:

LLRHPLPGFL KFFPQTODPH GVQRVDQCET EAKPLTEGPG HRLQLVMAFC KLAVSFPCMQ60
EDVNHALLAI VQMHWCALCP GRWQGRLLGGH FCSS 94

(2) INFORMATION ON SEQ ID NO. 297:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 146 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 297:

SGPLLAGPAT LTGRMSEVRL PPLRALDDFV LGSARLAAPD PCDFQRWCHR VINNLLYYQT 60

NYLLCFGIGL ALAGYVRPLH TLLSALVVAV ALGVLVWAAE TRALCAAAAA ATLQPAWPQC120
LPSASWCSGS RAALAPSCSA SPGRCF 146

(2) INFORMATION ON SEQ ID NO. 298:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 152 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN

- (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 298:

TQRHSHPPFS MLIPKLGPGA RHSQILNPGP KLFQTPPYLP TQVKTLPNLE LRTQVFHAPV 60
 WMESGILTVG PLVQVIPTLT SPICLPPALL RHFAPHPNVP HHRQPRGEVG TGLSREWGCVY120
 VSAATIKPV ASLMPKKKKK STGRKYSSSS RP 152

(2) INFORMATION ON SEQ ID NO. 299:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 172 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN

- (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 299:

RTTTTTIFAA GRLFFFFWHE RCNRLYCCSN TNIYAPFFAE ACPHLTPWLS MVWNIGVRGK 60
 MPKQSWREAN GTGEGRDHLD QGSNSQDTRL HPHRGMEHLG SEFKIWQCLD LGWKVGWGLE120
 KLWSRVQDLR VPCSRPOFGD EHGEWGMGVS LGSQFEIGHG CSGLPQFWG WM 172

(2) INFORMATION ON SEQ ID NO. 300:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 178 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 300:

WEWRESYWQT IKVDLQVEHP YQFLLKYAQ LKGDKNKIQK LVQMAWTFVN DSLCTTSLQ 60
WEPEIIAVAV MYLAGRLCKF EIQEWTSKPM YRRWWEQFVQ DVPVDVLEDI CHQILDLYSQ120
GKQQMPHHTP HQLQQPPSPE PPTPLPGPCG CWASHLKEGK VVQPEPVEQC PVWPPKPK 178

(2) INFORMATION ON SEQ ID NO. 301:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 113 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 301:

CISQDVCANL KYKNGPPNPC IGDGGSSLFK MSRSTFWKTS ATKSWIFTHK ENNRCLITPP 60
ISCNSPHLLS LPPRCLGPVV AGPPTSRRGR LYSPNPWSNA LSGLQNQNKT GSL 113

(2) INFORMATION ON SEQ ID NO. 302:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 90 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 302:

GGRPSNHRAQ AAGWEAQEMG AVAADGGCDE ASVVFLVSKD PGFGGRCLPK RRPGHLEQTA60
PTISYTWVWR SILVFQICTN VLRDTSLLLL 90

(2) INFORMATION ON SEQ ID NO. 303:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 158 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 303:

TQVMVQSMFA PTDTSDMEAV WKEAKPEDLM DSKLRCVFEL PAENDKPHDV EINKIISTTA 60
 SKTETPIVSK SLSSSLDDTE VKKVMEECKR LQGEVQRLRE ENKQFKEEDG LMRKTVQSN120
 SPISALAPTG KEEGLSTRLL ALVVLFFIVG VIIGKIAL 158

(2) INFORMATION ON SEQ ID NO. 304:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 112 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 304:

VNKALPFISK ALGQSVNTRL SLMTSTSDAA TVQFLWASDS VHQSQGADGL ORTEDTESSL 60
 GREWATWGLL CGADRTPOHA GLQLPKGQHQ QARKGVILRE VIQHHVPRPT NV 112

(2) INFORMATION ON SEQ ID NO. 305:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 105 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 305:

FKGKTCEMSS YINFFLHMVM INLNPMIWWI HQSNLPSCAC YLYKAIFPII TPTIKNKTTR 60
AKSRVLRPSS FPGVANAEMG LLLCTVFLIR SPSSSLNCLF SSRSL 105

(2) INFORMATION ON SEQ ID NO. 306:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 126 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 306:

RPPQRTLRRHS AQLGAAPAAL PQPLWELPRA HGSQRQPGPG EAADHAEQER EEAAERPGSS 60
PEEGQEGSGA FGGHTGHRAC ARCLGRGALG GRIPCGLLCQ LFRRDGC PAD SEVQHIIHQH120
WQQLLP 126

(2) INFORMATION ON SEQ ID NO. 307:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 240 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 307:

NVGRCCQA RAGAASLNAS LDGLHNALFA TQRSLEQHQR LFHSLFGNFQ GLMEANVSLD 60
 LGKLQTMLSR KGKKQKQDLE APRKRDKEA EPLVDIRVTG PVPALGAAL WEAGSPVAFY120
 ASFSEGTAAL QTVKFNTTYI NIGSSYFPEH GYFRAPERGV YLFAVSVEFG PGPQTGQLVF180
 GGHRTPVCT TGQSGSTAT VFAMAELOKG ERVWFELTQG SITKRSLSGT AFGGFLMFKT240

(2) INFORMATION ON SEQ ID NO. 308:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 123 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 308:

KAGIEGHRGS CLPERRAQT WHRPCDEYVH QRLRFLLVPL PGSFQVFLLL LPFPAQHGLQ 60
 LPQVQADVGF HEPLEVPKEA VEEPLVLLQA ALSGEECVVE AVKGGVEGGG PGPGLGLAAP120
 PDI 123

(2) INFORMATION ON SEQ ID NO. 309:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 84 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 309:

PTTTLVIPLF FLSSRKRKQK DSFQTALCSL HCSFPAQAAS TGKAHVVTPT FSEVLLFHGV60
 TLLSESKFRK QVLPLADKNH TSFL 84

(2) INFORMATION ON SEQ ID NO. 310:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 128 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 310:

CDRVPLFLSY WCAVADSWLT ASSVSHVKG I LSPQPTCAP PGPANCFNF FFFFFFFLVET 60
 GSPSVAQDGL ELLGSSNPPT LASQSAEITG MSHYAQPEQD DLNLINSTPK QQLSLSQGCQ120
 GGLCEGKD 128

(2) INFORMATION ON SEQ ID NO. 311:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 96 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 311:

WVAGRRHLLS VQTKSLQVLG LDLCVTPESQ CIRYLYKKLV WFLSAKGKTC FLNLLSDNKV60
 TPWKRRITSEK YGVTTWAFPV LAACFGKLQC RLQRAV 96

(2) INFORMATION ON SEQ ID NO. 312:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 57 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 312:

ISTSIAALWL PGGQDAGGGA LWPLCGSRGL CVSDREFGNF RARLTSWKFK YSIALEF 57

(2) INFORMATION ON SEQ ID NO. 313:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 52 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 313:

SAHQHQHCGY QGVRMRAVEP SGLCVVAEDS VSATVFRETS GRDSHLGNSN TQ 52

(2) INFORMATION ON SEQ ID NO. 314:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 43 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 314:

NSRAIEYLNQ QDVSLARKFP GKRSALTQSPR LPHKGQRAPP PAS 43

(2) INFORMATION ON SEQ ID NO. 315:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 247 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 315:

GSSGSRFEVV VVLEERRGGR GRGMGRGDGF DSRGKREFDR HSGSDRSGLK HEDKRGGSGS 60
 HNWGTVKDEL TESPKEYQKQ ISYNSYDLQ SNVTEETPEG EEHHPVADTE NKENEVEEVK120
 EEGPKEMTLD EWKAIQNKDR AKVEFNIRKP NEGADGQWKK GFVLHKSSE EAHAEDSVMD180
 HHFRKPANDI TSQLEINFGD LGRPGRGGRG GRGGRGRGGR PNRGSRTDKS SASAPDVDDP240
 EAFPALA 247

(2) INFORMATION ON SEQ ID NO. 316:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 75 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 316:

FMKNKSLPL PISTFIWFS IKFYFCPLI LNSLPLIQSH LEWTLLFYLF NFILLIFSVC60
 HWMMFFTFRC FLSHI 75

(2) INFORMATION ON SEQ ID NO. 317:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 78 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 317:

SFGILKHAKA LNRRVHKGTR VVLWHPVKPE LGMPLGHPHQ EQKHLTCRSC CHGLGAHHAH60
VHLVLPGRHV LGGQGLQN 78

(2) INFORMATION ON SEQ ID NO. 318:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 235 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 318:

LHLGAQRALA PGLFRLQGML RALLGRQLFR ARGPPVVREP LPRTRLAVR HVWPPCDRPL 60
RVGPGSPLPP GPLHMHLLPA PAHQGVLPGA RRQALLPALL PEALRLTARS ARPLPRRPRP120
PGKAGSSRPR GLALRAGGPT HWRAPPLRYE ESSGVKFRNG PARPKPTRPQ SGLHTDKNSR180
AGLHSIPTLE GAPLLGEGPC NSSSEARPG RPCSLPHPCS VHFFYLHKHT HSTSK 235

(2) INFORMATION ON SEQ ID NO. 319:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 478 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 319:

GSRPPPCSPR ATGPRPAMED LDALLSDLET TTSHMPRSGA PKERPAEPLT PPPSYGHQPQ 60
 TGSGESSGAS GDKDHLSTV CKPRSPKPAA PAAPPFSSSS GVLGTGLCEL DRLLQELNAT120
 QFNITDEIMS QFPSSKVASG EQKEDQSEDK KRPSLPSSPS PGLPKASATS ATLELDRLMA180
 SLSDFRVQNH LPASGPTQPP VVSSTNEGSP SPPEPTGKGS LDTMLGLLQS DLSRRGVPTQ240
 AKGLCGSCNK PIAGQVV TAL GRAWHPEHFV CGGCSTALGG SSFFEKDGAP FCPECYFERF300
 SPRCGFCNQPI IRHKMVTALG THWHPEHFCC VSCGEPFGDE GFHEREGRPY CRRDFLQLFA360
 PRCQGCQGP I LDNYISALSA LWHPDCFVCR ECFAPFSGGS FFEHEGRPLC ENHFHARRGS420
 LCATCGLPVT GRCVSALGRR FHPDHFTCTF CLRPLTKGSF QERAGKPYCQ PCFLKLFG 478

(2) INFORMATION ON SEQ ID NO. 320:

- (i) SEQUENCE CHARACTERISTIC:
- (A) LENGTH: 285 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 320:

EQGLGVWRTR LFREGAASGG EGEPSGLSAE ELQEAGLAVG LAGALLEGPL GERAQAEGAC 60
 EVVRVEAATQ GRHAAAGHRE ATRGAQRAAS CVEVVLAQRA ALVLEKAASR EGREAFPADE120
 TVRVPERAER RDVVIQD GAL AALARGEQL QEVPAAVGAA LALVETLISE GLPATDAAEM180
 LWVPVSAQGG HHLVSDGLVA EATSWREALK VALGAEGGSI LLEEAAASQG GGTASANEVL240
 GVPGAAQSRH HLP SNRFIAG ATEAFGLGN TPAAEVGLQQ PQHGV 285

(2) INFORMATION ON SEQ ID NO. 321:

- (i) SEQUENCE CHARACTERISTIC:
- (A) LENGTH: 99 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 321:

GLHLQPLLWR QSTEEEVREE GQALTEPKSC GAQGGAQHRG LTPCPTGNGL GLAQPKIPAL60
 SNSWRVDSVL ACLVSSDIFH TVEQNHQPCT DVTLCRKR 99

(2) INFORMATION ON SEQ ID NO. 322:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 99 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 322:

ETQSSQRLTC PRSLGLDLSL RLRLQNPHSI CYISQGWGQG SCEQKEKYQL LKGLGFVGRA60
 RQGQRGIQNK GASTSAWDGP IHSGRGCGVS PVLNRHLAS 99

(2) INFORMATION ON SEQ ID NO. 323:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 83 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 323:

SNPKAPVSMW VKGPTMGTYT QEDESSLASE SDCLPQTPPQ NRLLSHLPLH SDKTQAHIPG60
 PGVFACICID GNAGPAKAFF YIK 83

(2) INFORMATION ON SEQ ID NO. 324:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 111 amino acids

- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 324:

VFPTVLRGVL VPSSVTSKPG LIVPIGDEGG MRRSHLQLLS VERTSGTEKN RGPHGSLEGR 60
GTRVGELIAE RRDVQRPSAP LSWDVNRIFP STPSLPPVLP LFFFPSIKRC I 111

(2) INFORMATION ON SEQ ID NO. 325:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 272 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 325:

SSRASGITRA ARPCPAKNEG PSKAFVNCDE NSRLVSLTLN LVTRADEGWY WCGVKQGHFY 60
GETAAVYVAV EERKAAGSRD VSLAKADAAP DEKVLDSGFR EIENKAIQDP RLFAEEKAVA120
DTRDQADGSR ASVDSGSSEE QGGSSRALVS TLVPLGLVLA VGAVAVGVAR ARHRKNVDRV180
SIRSYRTDIS MSDFENSREF GANDNMGASS ITQETSLGGK EEFVATTEST TETKEPKKAK240
RSSKEEAEMA YKDFLLQSST VAAEAQDGPQ EA 272

(2) INFORMATION ON SEQ ID NO. 326:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 241 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 326:

TLVEGRLRTK PFRIPGFLQR KRRWQIQEIK PMGAEHLWIP AALRNKVEAP ERWSPFWCPW 60
 AWCWQWEPWL WGWPEPGTGR TSTEFQSEAT GQTLACQTSR TPGNLEPMTT WEPLRSLRRH120
 PSEEEKSLLP PLRAPQRPNK PRRQKGHPRR KPRWPTKTSC SSPAPWPPRP RTAPRKPRRC180
 RLLLPAPMTI TFRIMSILGP SAPGDPTPCS NTCLGFSYCP QRRAGPLSD IKAWPNCSYW240
 G 241

(2) INFORMATION ON SEQ ID NO. 327:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 121 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 327:

AVVRVTWYKG EGITLPPVLT PALVRGESIP IRLFLAGYEL TPTMRDINKK FSVRYYNLV 60
 LIDEEERRYF KQQEVVLWRK GDIVRKSM SH QAAIASQRFE GTTSLGEVRT PSQSDNNCR120
 Q 121

(2) INFORMATION ON SEQ ID NO. 328:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 140 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 328:

GETRVHSQQG GGIKAPSWDW FFREPGPLVK GLLGHVKQYL EQPRPWGYQV ERREGRRLLPC 60
 THLPWWAGFS LLGSTLPSPV HDTDFRASPC PRPSYRLLEQ DITDNPERME KGGAWVPAVS120
 GQKEVACGNL RSPHPRFPKR 140

(2) INFORMATION ON SEQ ID NO. 329:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 127 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 329:

VFPCHLVGAG PTPATTSGTA KGSTRCDYPG PCWQLRIPGT CSDEPVSGSSE SQEPRMRALC 60
 SPSSKTQGSF PRKGAHVPQR GWLPGCYLFY PTSAAESQGE TASHPKPLGF SREKNLSQKH120
 DLFSGCK 127

(2) INFORMATION ON SEQ ID NO. 330:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 418 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 330:

GSTSTKNTKI SQACGVIVEL IKSKKMAGGA VLLAGPPGTG KTALALAIQA ELGSKVPFCP 60
 MVGSEVSTE IKKTEVLMEF FRAAIGLRIK ETKEVYEGER TELTPCETEN PMGGYGKTIS120
 HVIIGLKTAK GTKQLKLDPS IFESLQKERV EAGDVIYIEA NSGAVKRQGR CDTYATEFDL180
 EAEYVPLPK GDVHKKKEII QDVTLDLDV ANARPOGGQD ILSMMGQLMK PKKTEITDKL240
 RGEINKVVNK YIDQGIAELV PGVLFVDEVH MLDIECFYTL HRALESSIAP IVIFASNRGN300
 CVIRGTEDIT SPHGIPDLL DRVMIIRTML YTPQEMKQII KIRAQTEGIN ISEEALNHLG360
 EIGTKTTLRY SVQLLTPANL LAKINGKDSI EKEHVEEISE LFYDAKSSAK ILGLTRQG 418

(2) INFORMATION ON SEQ ID NO. 331:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 142 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 331:

VPQCGLGANL PQVVQCLLTD VDSFRLGTDF NDLFHLWSI QHGPDYHHSV QKVKRDAVRG 60
 CDVLSASDDT VASVGCKDDD GSDRRLOGAV QVGEALNVQH VDLINKQHTR DQLSNALVDV120
 LVHHLINLPS KFCVDFCLLW LH 142

(2) INFORMATION ON SEQ ID NO. 332:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 124 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 332:

LAHHGQDILS PLGPRISHIQ VMQGHILDDF FLFVHIPFWQ GDILFSFKVE FCGIGITPAL 60
 PLHGPTVGFN VNHISFYSL FLQTFKNAGV QFQLFGSFGC FESYDHMANG FAISSHGILC120
 LTRS 124

(2) INFORMATION ON SEQ ID NO. 333:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 176 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 333:

QAMGKKQKNK SEDSTKDDID LDALAAEIEG AGAAKEQEPQ KSKGKKKKEK KKQDFDEDDI 60
 LKELEELSLE AQGIKADRET VAVKPTENNE EEFTSKDKKK KGQKGKKQSF DDNDSEELED120
 KDSKSKKTAK PKVEMYSGSL TNFLKKLKGK LKNQIRSGMG QRRMRITVKK LKSVQE 176

(2) INFORMATION ON SEQ ID NO. 334:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 193 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 334:

RFKIKKDCKT ESGNVLWEFN KLPKKAKGKA QKSNKKWDGS EEDEDNSKKI KERSRINSSG 60
 ESGDESDEFL QSRKGQKKNQ KNKPGPNIES GNEDDDASFK IKTVAQKKA EKKERERKKRD120
 EEKAKLRKLK EKEELETGKK DQSKQKESQR KFEETVKS KVTVDGTGVIP ASEEKAETPTA180
 AEDDNEGDKK NER 193

(2) INFORMATION ON SEQ ID NO. 335:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 118 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 335:

ETVAFARPPF PSLEFPPPLS SFLFLIFRS FCLLHCHLLQ LWESLLSLQR QELLQYQQSL 60
 WILQFLLQIS FEIPFVYSDP FYLFLTLLFL SASAVSLFLH LAFFSRAPSF LPSFGPLS 118

(2) INFORMATION ON SEQ ID NO. 336:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 230 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 336:

LQRLLPAGAE RPAHLCTGPG GEDGAGGRVP GTRPQRPPAL QRAEDGRQGG LRVAGTAGPP 60
 PGVPLRPGQG GSGHQEQGAS HPGSLDQGLT GAKRPQGCPA CGRRPPCVGG VPGSAHRPQP120
 EGAALRRGRS RLQQAGPCCC RVLWLRRCHP AGLPRRPPAA DPGARAAAGG RHVLCRSPLH180
 PGLRPPLPQW GLLRPEGGCL CVPVSRGILR TALREGAGGE VSGGRGYLGL 230

(2) INFORMATION ON SEQ ID NO. 337:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 416 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 337:

QDGGSPFLAD FNGFSHLELR GLHTFARDLG EKMALEVFL ARGPSGLLLY NGQKTDGKGD 60
FVSLALRRDR LFRYDLGKG AAVIRSREPV TLGAWTRVSL ERNGRKALR VGDGPRVLGE120
SPVPHTVLNL KEPLYVGGAP DFSKLARAAA VSSGFDGAIQ LVSLGGRQLL TPEHVLQVD180
VTSFAGHPCT RASGHPCLNG ASCVPREAAV VCLCPGGFSG PHCEKGLVEK SAGDVDTLAF240
DGRTFVEYLN AVTESEKALQ SNHFELSLRT EATQGLVLWS GKATERADYV ALAIVDGHQ300
LSYNLGSQPV VLRSTVPVNT NRWLRVVAHR EQREGSLQVG NEAPVTGSSP LGATQLDQ360
ALWLGGLPEL PVGPALPKAY GTGFVGCRLD VVVGRRHPLHL LEDAVTKPEL RPCPT 416

(2) INFORMATION ON SEQ ID NO. 338:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 241 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 338:

NQHMKNNTAMA RPRYPGRRQR STPSHSELLS IAPRRWGVV EGYGHVQGGW AGPAEQDQ 60
IGPGLASAPQ QPGLAQARE QRRVPSSNI VWKSQYWRRR PRQGPEHTQE GAAQIGAWK120
PVGSPGGRAP SDLSSPFLSG TRVPPDGRV IQEPGLLP GG DTVGQAQCKA GAQHLEAGVC180
VLRLPSTPSP PRCHLACPSL STRSVCSTAA WTEGRPGQQS LRPTLRQENH IKKRQVYKNR240
K 241

(2) INFORMATION ON SEQ ID NO. 339:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 79 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 339:

LLQPQGEMPP GNPPMSTRGQ EATVLRTPEN LAGELFLVHP SLQLYLCPAD NVKDWSKVVL60
AYEPVWAIGT GKTATPQQG 79

(2) INFORMATION ON SEQ ID NO. 340:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 62 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 340:

FPVGVLQSCQ YQWPTQAHRP GRPCSSPSRY LQGRDTAGGK GEQERALQPG SPEYEERWPP60
AP 62

(2) INFORMATION ON SEQ ID NO. 341:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 80 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 341:

SLLGCCSLAS TNGPHRLIGQ DDLAPVLHVI CRAEIQLEGR VNKKELSSQV LRSTKNGGLL60
PPSGHWGISR WHLPLGLEKS 80

(2) INFORMATION ON SEQ ID NO. 345:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 257 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 345:

```
KNLSQLEPRE NAKEEVRKER GMGWVAAGAA QLLSLLSTST ASDSSVISSS ACTSGLLPRR 60
RSPASPRSAH LHLGGLLEHF HLALADLLDV EGEGLVLDV GLGARVHHVV GREGFAQLVP120
RRLQFLAPLG GHQARAQLVH ALLQGVPRLL QVFLGLEARL LQVLAGTHLG LLHLLGEG180
LEVVAHQAL RLIRSARDSS ITSSTSTASS DESSSAAASS SGRSPSPSS PSFSGSASDS240
FSDLLMLSLA GSFTSSW                                     257
```

(2) INFORMATION ON SEQ ID NO. 346:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 237 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 346:

```
KSRRCQRRR ARSWARASGP RRTQRRWSFR RTRRWRLRRL LRSPAQSVSS AGPAARGRLQ 60
EGLQGEDGE DQAYPREPG EDAPQDQGP GEDAAHPGEA HEQAGHAPGA RRAARETEDV120
AGQVAQILHA RPRGVRLQD RGLQGATLHL PRQEDPRGPG GSAQGHARDGG GGRSGGRPAT180
CGAGAAPTCT RCWRSRPSRT PCWWTRATAT ERPPLPPTPF LAPSELPLSH SLSARAG 237
```

(2) INFORMATION ON SEQ ID NO. 347:

- (i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 263 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 347:

```
GRLPGYPDRR GPGASSAGAQ AAEEPSGAGS EELIKSDQVN GVLVLSLLDK IIGAVDQIQL 60
TQAQLEERQA EMEGAVQSIQ GELSKLGKAH ATTSNTVSKL LEKVRKVSVN VKTVRGSRLR120
QAGQIKKLEV NEAELLRRRN FKVMYQDEV KLPKLSISK SLKESEALPE KEGEELGEGE180
RPEEDAAALE LSSDEAVEVE EVIEESRAER IKRRACGAWT TSRRPSPRRR WRRPRCVPAR240
TWRRRASRPR KTWRRRGTPW RSA                                     263
```

(2) INFORMATION ON SEQ ID NO. 348:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 106 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 348:

```
SSGSSRFSS GSRRRYASLY FCCAIEDQON ELITLEIIHR YVELLDKYFG SVCELDIIFN 60
FEKAYFILDE FLLGGEVQET SKKNVLKAIE QADLLQEEAE TPRS GS                                     106
```

(2) INFORMATION ON SEQ ID NO. 349:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 78 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 349:

LFLMPQNKVR MVIQEFFFIT VSYKKRVALF TVLCVKSLFK ARMFPLGYLL KLNLFCEPPL60
 RSAAHFTAAS FLSMALPS 78

(2) INFORMATION ON SEQ ID NO. 350:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 65 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 350:

TCLHGLYFHL YMLGWIKLCC DCDQHS GHVS TVLSHRQLVV INVQRTKKKK GAASLGGITG60
 SGVKR 65

(2) INFORMATION ON SEQ ID NO. 351:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 196 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 351:

LPGLPLRQLG GVCHGHRPGL LLHQQHGGGA GAVQQPQREE EALHDPGQGS APAELCQFQQ 60
 HVPRFPLQQP QAVQEGGGAG AGQGLVLWQP GAGLQGVQPG DDGAPDLQHG DAAGDSHHDD120
 PAQELPAAEH RAQGPGGPRP ALRGGARSNC RVCLVQMCPE APEGSHQLMP ASDPQQGWFA180
 AAAQGEPSVD PGHHHH 196

(2) INFORMATION ON SEQ ID NO. 352:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 361 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 352:

SLASLSDSLG VSVMATDQDS YSTSSTEEEL EQFSSPSVKK KPSMILGKAR HRLSFASFSS 60
 MFHAFLSNNR KLYKKVVELA QDKGSYFGSL VQDYKVYSLE MMARQTSSTE MLQEIRTMMT120
 QLKSYLLQST ELKALVDPAL HSEEELEAIV ESALYKCVLK PLKEAINSCL HQIHSKDGSL180
 QQLKENQLVI LATTTTDLGV TTSVPEVPM EKILOKFTSM HKAYSPEKKI SILLKTCKLI240
 YDSMALGNPG KPYGADDFLP VLMYVLARSN LTEMLLNVEY MMELMDPALQ LGEYSYLLT300
 TYGALEHIKS YDKITVTRQL SVEVQDSIHR WERRRTLNKA RASRSSVQPL HLRVVPGARA360
 A 361

(2) INFORMATION ON SEQ ID NO. 353:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 161 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 353:

VDFGLQGLQD TFVQGRLYNC FELLGLGVQGG VHQGLELGAL QQVALELGHH GANLLQHLRA 60
 GGLARHHLQA VHLVVLHQAA KVRALVLRQL HHLLVQLAVV GEESVEHAAE TGKAQPVPSL120
 AQDHGGLLLH AGAAELLQLL LRAAGGVGV VGGHDRHPQA V 161

(2) INFORMATION ON SEQ ID NO. 354:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 218 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 354:

```

SGRGPKYVID VEQPFSC TSL DAVVNYFVSH TKKALVPFLL DEDYEKVLGY VEADKENG 60
VWVAPSAPGP GPAPCTGGPK PLSPASSQDK LPPLPPLPNQ EENYVTPIGD GPAVDYENQD120
VASSSWPVIL KPKKLPKPPA KLPKPPVGPB PEPKVFNGGL GREAAASSVSA QPLLSPQAGL180
GRHGRQSYRR SWEKRRGTGS MVSDTPGTSG LVPGRARW 218

```

(2) INFORMATION ON SEQ ID NO. 355:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 253 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 355:

```

AGEGVDGLTQ ETPLKPVSQ L PGPAGAPTGR RGQAEDPGSV MASALRPPRV PKPKGVLPSH 60
YYESFLEKKG PCDRDYKKFW AGLQGLTIYF YNSNRDFQHV EKLNLGAF EK LTDEIPWGSS120
RDPGTHFSLI LRNQEIKFKV ETLECREMWK GFILTVVELR VPTDLTLLPG HLYMMSEVLA180
KEEARRALET PSCFLKVSRL EAQLLLERYP ECGNLLLRPS GDGADGVGHH ADAQRDARG240
PALQGEAGGA PST 253

```

(2) INFORMATION ON SEQ ID NO. 356:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 118 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 356:

LTTASREVQE NGCSTSITYL GPLPLHLVMP DHVRPVVHLP RGDRHRRRRP RWAAAAGSRT 60
RGSAPGAVVP PAGSPSGSTR VSPVHGAPPL WPRLQTSCIG AQEAGSSRSR HGAPPPLR 118

(2) INFORMATION ON SEQ ID NO. 357:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 223 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 357:

DHTCGCAGNL QEAIMLRSGV TSQGIHPGSP WCCTPTQ AEL IVGDQSGAIH IWLKTDHNE 60
QLIPEPEVSI TSAHIDPDAS YMAAVNSTGN CYVWNLTGGI GDEVTQLIPK TKIPAHTRYA120
LQCRFSPDST LLATCSADQT CKIWRTSNFS LMTELSIKSG NPGESSRGWM WGCAFSGDSQ180
YIVTASSDNL ARLWCVETGE IKREYGGHQK AVVCLAFNDS VLG 223

(2) INFORMATION ON SEQ ID NO. 358:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 193 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 358:

FFFFFFFFFP EQHLRVGLLL LPPRLSPRPG PAWPVPNPVG WPGHLHQGGQ LLAGTNKPFH 60
 LAMVVVFSMD RGPETRAGRG REHTSLGVGT SLRPLSSFPG SADFPQCRL AQSRSVQPGL120
 GRALSHLDKQ LGAESPRAAW PSRSRAHRGP SGPVAQAGRG GSALTWVLHG SLQLPPFPAPG180
 SPEGSQASPA HCH 193

(2) INFORMATION ON SEQ ID NO. 359:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 251 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 359:

PGCCMGPPSSC HHLHQAVPRG HRLAQHTVIE GQADNSLLVA AILSLDLSSL HTPPEGQVVR 60
 GSSDDVLGVP REGAAPHFAA GGLPGVAALD AQLRHQGEVG RPPDLARLIS RAGGEERGCVG120
 AEATLQGVAR VGRDLSLGDE LGHLVTNAPR QIPDIAVSGA IDSCHVAGVG IDVGGRDGD180
 GLRDQLLVVV CFQVPDVDSF ALVTHDELCL GWGAAPGTTPR VNALGGHTGP QHDCFLQVTS240
 TSACMILTSS C 251

(2) INFORMATION ON SEQ ID NO. 360:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 50 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 360:
GNIPHSNLTD ASSPKRIKIV ACTDQENILG RMKYVCLFFF KNKGFWNSGE

50

(2) INFORMATION ON SEQ ID NO. 361:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 59 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 361:

KGNQLYQGET RALGTMTRT AFILHSDCF QSSNDCQATS QMTDNFCCSF LYKMLRQQA 59

(2) INFORMATION ON SEQ ID NO. 362:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 67 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 362:

DKILLSPRME CSGMIMAHCS LDLPGSHLSL PSSWDHRHVP PCPANFYFGR DKVSPCCLGR60
FQTPGLK 67

(2) INFORMATION ON SEQ ID NO. 363:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 84 amino acids

- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 363:

MRRCIHPSHS LSGSRQTQSP LSHSASNGST TKVAQQMRRA AAVVGESTEE TRLGRALGAA60
GFTNKQLSEN TAQGEKRVN CLQN 84

(2) INFORMATION ON SEQ ID NO. 364:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 127 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 364:

CAYRTEKWKS HTVPCSPEVK LVLTLALRAF SSMEPLGLGR KARVSAHRHT SYLQDIDCLC 60
RGSTGQPTAN TAASLVASL LPVHPGDYSW INLPKNSAFI MSLFCSKTQN GSLPPRGRPS120
HHCIPNR 127

(2) INFORMATION ON SEQ ID NO. 365:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 114 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 365:

PYVHSPAWSP WGLVGRLVSV HTDIPATFRT LIVSAEVALG SQLQTQQPPW FQLLSFQYIL 60
ETTPGLIFLR TQHSLCHFSV RKP KMAPCHL EADQVITVSP TASTVCIWYI VQAP 114

(2) INFORMATION ON SEQ ID NO. 366:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 30 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 366:

NLHSNIKVFF YNVPKISGPQ QAVFVPVFFN

30

(2) INFORMATION ON SEQ ID NO. 367:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 44 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 367:

KECMSEAQFL ATTLTKGNNC RGILQLIHTQ HLLHTVFTDS NLVG

44

(2) INFORMATION ON SEQ ID NO. 368:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 34 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 368:

NVDFRCKNML EIRFSAIKPN TKKIKKNVCQ KPNS

34

(2) INFORMATION ON SEQ ID NO. 369:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 147 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 369:

QPSSLLHHCP YPYPPRHLLA TPLLKPQLLA GSPAHASLIS FLASPQRASR QHGGPSQRAG 60
 TLSCPLVELG GSSGGRGLCH GSADPTNRAA EPQERGEPA GDRRPLPEWG RVSLAESPGA120
 EFRCPGSLGE WGEIPEKESS AHPKTEE 147

(2) INFORMATION ON SEQ ID NO. 370:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 244 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 370:

NHSCWQGPQL MPASSPFLLA PKGPPGNMGG PVREPALSA LWLSWGAALG AVACAMALLT 60
QQTSLQSLRR EVSRLQGTGG PSQNGEGYPW QSLPEQSSDA LEAWESGERS RKRRAVLTQK120
QKNDSDVTEV MWQPALRRGR GLQAQGYGVR IQDAGVYLLY SQVLFQDVTF TMGQVVSREG180
QGRQETLFRG IRSMPSHPDR AYNCSYSGV FHLHQGDILS VIIPRARA KL NLSPHGTFLG240
FVKL 244

(2) INFORMATION ON SEQ ID NO. 371:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 185 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 371:

TPASWIRTPY PWACRPLPRL RAGCHITSVT SESFFCFWVS TALLFRDLSP LSQASRASEL 60
CSGRLCQGYP SPFWEGPPVP CSRLTSLRL CSSVCWVSRA MAQATAPRAA PQLNQRATES120
AGSLTGPPML PGGPLGASKK GDEAGMSWGP CQQLWFQEWG SKEVAGRVRV RAVVQKGRRL180
LRKEK 185

(2) INFORMATION ON SEQ ID NO. 372:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 148 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 372:

VLYHCASRYR RRARQTCAPS YTRSADLPSR TPPVEDLLEL SRAFWVGADG GGRVRVLGGT 60
 EAHEDGIPPE SMDHYADGHR PQHCHLGYRC HGRPQREGLP RCLKVPPVNL SSVSVFPFVT120
 HRAGMEFNGC SGQTLVHGQT SLLWILQD 148

(2) INFORMATION ON SEQ ID NO. 373:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 135 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 373:

CLPVRRRLRQF EPKTPKVEAE FQSMGSRLSQ PFESYITAPP GTAAAPAKPA PPATPGAPTS 60
 PAEHRLLKTC WSCRVLSSGLG LMGAGGYVYW VARKPKMKG Y PPSPWTITQM VIGLSIATWG120
 IVVMADPKGK AYRVV 135

(2) INFORMATION ON SEQ ID NO. 374:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 152 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 374:

IPCLLCVSRG KGQRQKTDLS VVLSNNAVGL PFGVCHDNDT PGGNAEADDH LRNGPWTRGV 60
 SHLHGLPCHP VHVPARPHQP QPRKHATAPA GLQQAVFCWG GRRSGCSWGR RFGGRGGGTG120
 RRSDIGLKRL QQPRPHALEL GLNLGRLWFK LA 152

(2) INFORMATION ON SEQ ID NO. 375:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 107 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 375:

GAEQLRSCA MAVSQEGLDG EVKAPDARIF IPCANTAFTP DLQVLQQVLS SFTVSSPLFH 60
SGFICYTPNL FSQSTPQSLP CWGQHRKRQN LRKEKGNLQP AMDLMIP 107

(2) INFORMATION ON SEQ ID NO. 376:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 113 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 376:

IPKNFYHNIH RSLYQLYLEV KQAWESIDCS ACPRVEALNK ATKTPEITDL TFQWPTGPGS 60
GQVGHQANHL FPCASLCKSW SVFLARPSLV QDLGPQTKES RGLGFPDPRM VSL 113

(2) INFORMATION ON SEQ ID NO. 377:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 124 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 377:

FGGPQAQPHS AVGSSLSSQI QVNLSFKNKG EPQTCSTTRD NNTPWQEDHV LDCLRTATVR 60
 QEACCDPLCS MPFAQASSIP YHLPPMLFFG TTTLAKREYG KQRPRALLQY RHFEVGRQHM120
 LHSK 124

(2) INFORMATION ON SEQ ID NO. 378:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 66 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 378:

HKIILISRYR RNSVVTQAI LYTPMILQRK HPSLLLPLW QKICCSSTL KRRKRNNLSL60
 IPKLPH 66

(2) INFORMATION ON SEQ ID NO. 379:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 67 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 379:

PEKSPGAGPL LGGSPFFFFFF YVSKSTEEIL KHSIKFESHE TKASLHYMLI LAKSKDQHTI60
 DIHDNVV 67

(2) INFORMATION ON SEQ ID NO. 380:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 71 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 380:

FCIHFECLHV KTQLIYYFNI KPISFEAKLI LLFYKSNQDS FFRMLKAQCL RFMLAALLAL60
 LLPKMTKQN R 71

(2) INFORMATION ON SEQ ID NO. 381:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 107 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 381:

MDGAQGRLLP VSSRHSNLAL LKPTSRLTA PPEGASLMTV GGITAPRDVQ VWNPRTWESV 60
 TLRGKRDPAP VLQFRISWWG DDRGWLRWAL SNHGGPYKGR GVTRVCA 107

(2) INFORMATION ON SEQ ID NO. 382:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 143 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 382:

EVENHTNLLS YSSRGQESKM VFTRLKSCQC GFVSPRRLWG RIQCLFQLLQ GPPHRLAPGL 60
LAIFTARSFL ASCADPRDSP SLIRAPMITQ GPPQPSTVIS PPRNPCLKHR RRVPFATQGN120
TFPRPGVPLN DISGGCYSTH RHQ 143

(2) INFORMATION ON SEQ ID NO. 383:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 86 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 383:

SHTHAQLSNH GGVQEPPLPL GVPKPWGSDS GALS RPGCKL KTPGGFQNAQ CLGHNLDQLN60
LNLQDITAP QETPRGSQSA KPEETI 86

(2) INFORMATION ON SEQ ID NO. 384:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 123 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 384:

LEPIRFQQKV MEKETEKRIE EIEDAAFLAR EKAKQDAEYY AAHKYATSNK HKLTPEYLEL 60
KKYQAIASNS KIYFGSNIPN MFVDSSCALK YSDIRTGRES SLPSKEALEP SGENVIQNKE120
STG 123

(2) INFORMATION ON SEQ ID NO. 385:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 83 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 385:

DNSCVRYVEA QOKSHGTTSR NLSAVRPVSL MTVCWLCQTL YLGKESPDLN GSFPWALSYP60
GICNMEKIIF HFCSFNSINS LYK 83

(2) INFORMATION ON SEQ ID NO. 386:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 88 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 386:

CLTFQCRQYL SIRLSSFMS SLE RNTYRIL DKTVAEKTIC VS DSWLYPPI SGAPRTIAGE60
VEQMKCKFSV NLKSPYNDCS HLTPWATS 88

(2) INFORMATION ON SEQ ID NO. 387:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 105 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 387:

TCEPFRNPQV GKDPTPSLRI ICLAITGSWK CFLGCVKINQ GGMKHIFLAT KLEFLREQMQ 60
RDLILLARLQ GPLWSHTEAV TGHKPRRARG SCAEAPGPLS GSFPS 105

(2) INFORMATION ON SEQ ID NO. 388:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 173 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 388:

AQESPWQLCR GARTSKRKLP KLGMEQHCNE MCPSSSLFLP GAYKAQMYSD VWTNTKKKKK 60
KKKKKAFLSH RHKTQIIYCY EALFTNGQFL HFIAACERLP DGRPISLVLQ TSSQAAFYQK120
GENSCLSLFK NAFLYLSIRH YTSELYKRP G TMSLVDTFH CSVAPFLAWE ASA 173

(2) INFORMATION ON SEQ ID NO. 389:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 105 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 389:

TCEPFRNPQV GKDPTPSLRI ICLAITGSWK CFLGCVKINQ GGMKHIFLAT KLEFLREQMQ 60
RDLILLARLQ GPLWSHTEAV TGHKPRRARG SCAEAPGPLS GSFPS 105

(2) INFORMATION ON SEQ ID NO. 390:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 262 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 390:

```
RCPRRGREMD SGCWLFGGEF EDSVFEERPE RRS GPPASYC AKLCEPQW FY EETESSDDVE 60
VLT LKKFKGD LAYRRQ EYQK ALQEYSSISE KLSSTNFAMK RDVQEGQARC LAHLGRHMEA120
LEIAANLENK ATNTDHLTTV LYLQLAICSS LQNLEKTIFC LQKLISLHPF NPWNWGKLA E180
AYLNLGPALS AALASSQKQH SFTSSDKTIK SFFPHSGKDC LLCFPETLPE SSLIFCGRDT240
RNGRKIGKEC KCANLVGERG TG                                     262
```

(2) INFORMATION ON SEQ ID NO. 391:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 66 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 391:

```
KPVPLSPTRL AHLQNFPIFL PFLVSLPQKI KELSGKVS GK HKRQSFPECG KKD LIVLSLE60
VKLCCF                                     66
```

(2) INFORMATION ON SEQ ID NO. 392:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 78 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 392:

QAGGRVPWLN GLCWLLYFPS LQOSPAPPYA YPGEPDTEPD LPGHPFSWQN WLMTIFQRYW60
NTPAVLSOTL VVCRPGLL 78

(2) INFORMATION ON SEQ ID NO. 393:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 79 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 393:

TSLEGIDLQP SHLTIYTAAL KEKTPDFRRL SPRVSETADS RKVARGPRFV MRDNPGRGGD60
HRGLQAPGWM KEGRGWGVL 79

(2) INFORMATION ON SEQ ID NO. 394:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 72 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 394:

VTPPPPSQIS SFLPPSTAPF TKPPIPOPPS STPAPGDPYD HPRARGCPAL QIGAHGRPYG60
SPRSPRREER DV 72

(2) INFORMATION ON SEQ ID NO. 395:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 98 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 395:

PPPPPPKFHP SFRLLQPPLQ NPPSPTLLHP PRRLETPMIT PAPGVVPHYK SGPTGDLTG60
 RGLRDARRET SEVWRLFLQG CCVDCEVGGL KINSLEGG 98

(2) INFORMATION ON SEQ ID NO. 396:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 80 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 396:

NWRQTVWQRV REGACQESS RPASGCRFLR CAIGASAFSG DRGSAVATNT QPHTNHTHK60
 WGQPHPVQAF TNVISVLFYF 80

(2) INFORMATION ON SEQ ID NO. 397:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 309 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 397:

YDNSSTCKKG KVFPKGISVT VSETFDPEEK HSMAYQDLHS EITSLFKDVF GTSVYGQTVI 60
LTVSTLSLSPR SEMRADDKFFV NVTIVTILAE TTSDNEKTVT EKINKAIRSS SSNFLNYDLT120
LRCDYYGCNQ TADDCLNGLA CDCKSDLQRP NPQSPFCVAS SLKCPDACNA QHKQCLIKKS180
GGAPECACVP GYQEDANGNC QKCAFGYSG L DCKDKFQLIL TIVGTIAGIV ILSMIIALIV240
TARSNNKTKH IEEENLIDED FQNLKLRSTG FTNLGAEGSV FPKVRITASR DSQMNPYSR300
HSSMPRPDY 309

(2) INFORMATION ON SEQ ID NO. 398:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 105 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 398:

QALIASTTFN VIDSYLASEL DSLQTFTTSI QRGWQMSDGR KTPEARSLLV LTSPSVFLNT 60
LNNSLYIGWG PWRVPHSYDS NSQGGACCCV LNRDFASGCL WRPLS 105

(2) INFORMATION ON SEQ ID NO. 399:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 75 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 399:

CFSCFVICSV SLCTLNIYPL CDKKKKKKKK SRTSTFDFSQ PQPRKNGSWD KQLVFVSKTQ60
IGHINATAFR SFDFF 75

(2) INFORMATION ON SEQ ID NO. 400:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 70 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 400:

RKKAVCFMND LICFLDNTFK NNVLSQAWWC VHLVPTIWEA EAGGSLEPRS LKLQCPVVAP60
 VNNCTPAWAT 70

(2) INFORMATION ON SEQ ID NO. 401:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 69 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 401:

LVPQGSLLQT HPFVFFSFLE MRSRYVAQAG VQLFTGATTG HCSFKLLGSS DPPASASQIV60
 GTRCTHHHA 69

(2) INFORMATION ON SEQ ID NO. 402:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 80 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 402:

PPLWVATVRN GCCHVFWTLP ANRSLPGFGN TSITSLLLFC RDKTFEVARP RTSKDSCYSA60
TVYTAHLSYS HVLSSLVRLF 80

(2) INFORMATION ON SEQ ID NO. 403:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 81 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 403:

LTNMSDHLFG WLLLEMAVVM FSGLCQPTDP CQVLEILLP RCYFSAGIKL LRWPDPEHPR60
IPVTVLQYTL LIYPILMCFL L 81

(2) INFORMATION ON SEQ ID NO. 404:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 75 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 404:

VSHYPHSVSK PPKHQTKQMV VALTHSRLTS EFKWENTPYT TVIIPLWTLN ITYFLKIILL60
KKKAHENRIN EQCIL 75

(2) INFORMATION ON SEQ ID NO. 405:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 328 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 405:

```

RYLNMGNLLK VLTCTDLEQG PNFFLDFENA QPTESEKEIY NQVNVVLKDA EGILEDLSY 60
RGAGHEIREA IQHPADEKLQ EKAWGAVVPL VGKLKKFYEF SQRLEAALRG LLGALTSTPY120
SPTQHLEREQ ALAKQFAEIL HFTLRFDELK MTNPAIQNDF SYRRTLSRM RINNVPAEGE180
NEVNNELANR MSIFYAEATP MLKTLSDATT KFSSENKNLP IENTTDCLST MASVCRVMLE240
TPEYRSRFTN EETVSFCLRV MGVVIILYDH VHPVGAFKAT SKIDMKGCIK VLKDQPPNSV300
EGLLNALRYT TKHLNDETTT KQIKSMLQ                                     328

```

(2) INFORMATION ON SEQ ID NO. 406:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 115 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 406:

```

YYIHLIINFL LRLCRLGIFK IKEKIWPLLK VCACQNFKKI PHVKVPSASA GDSVLVLLSS 60
ARASRRSQSR SCALLDRRGG SSAALGGAPG PERGSGGSRT GSPSTPAPVA EPPQA      115

```

(2) INFORMATION ON SEQ ID NO. 407:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 100 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 407:

QEPALALDAG WENMGYLLRL PEDLLMLLLT SEKIRKISLI CLLVEQLHPM PSLATSHLLD 60
AGLPLVFRGQ LLCMTASPPR CLLHLLILHS PDYKFPSQTL 100

(2) INFORMATION ON SEQ ID NO. 408:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 116 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 408:

TVLHSHLPSS CLPCLSTHSV KEPRGATSPR LCFPTACGMG VSSATAGLRC FHQPCRHLVL 60
HEEQTLRGWS GMGRSPLGGQ ALVPSRFP SL APGVHTAQSA PGGWKPPCFR SLGSPP 116

(2) INFORMATION ON SEQ ID NO. 409:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 132 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 409:

SPDERCSIRT SPPRACPASP RTVLSQEEP LRPDFVSPPP AAWVCPVPPL ASAASISLVA 60
TWSEMKSRHL EAGREWGRP WEGRRWFQAG SRPWRLECTQ PSRHLVAGSH PALDHSGPHL120
RRVPALDQSR GH 132

(2) INFORMATION ON SEQ ID NO. 410:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 142 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 410:

```

WKQRRPAVAL DTPMPQAVGK QSLGEVAPLG SLTLCVERQG RHEEGRCEWS TVHPGISQPE 60
SPPSLAAPEH SLWPTATEMS ACQDTWRRKK TRHQKKLPPQ EQIELLDQGH TRSGRHPAPC120
AQGKETQFNV WLLCSRETAT LP                                     142
  
```

(2) INFORMATION ON SEQ ID NO. 411:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 244 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 411:

```

KRRGVRQFRW LVCTRRASPG AARSAPIAPA TGSGRRPNMD SAGQDINLNS PNKGLLSDSM 60
TDVPVDTGVA ARTPAVEGLT EAEEEEELRAE LTKVEEEIVT LRQVLAAKER HCGELKRRLG120
LSTLGELKQN LSRSWHDVQV SSAYVKTSEK LGEWNEKVTQ SDLYKKTQET LSQAGQKTS180
ALSTVGS AIS RKLGDMRNSA TFKSFEDRVG TIKSKVVGDR ENGSDNLPSS AGSGDKPLSD240
PAPF                                     244
  
```

(2) INFORMATION ON SEQ ID NO. 412:

- (i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 149 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 412:

LGHFLIPLSK FLRSFHIGAR DLHVMPAPGQ VLFQLPQGGE AQPPELSTV PLLGCQDLAQ 60
SDNLFHLGK LSPDLLLSL CQTLNSRSPG SHTCVDNRIR HGVRRQTFVR RIQVDILAGG120
VHVRAASGPC RGRYGRAGG AGRSSPRTH 149

(2) INFORMATION ON SEQ ID NO. 413:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 143 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 413:

ALETCTSCQL LDRFCFSSPR VERPSLLLSS PQCLSLAART WRRVTISSST LVSSALSSSS 60
SASVRPSTAG VRAATPVSTG TSMESDSRP LLGEFRLISW PAESMFGRRP DPVAGAMGAE120
RAAPGEARRV HTSQRNCLTP RRF 143

(2) INFORMATION ON SEQ ID NO. 414:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 105 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 414:

RGRGALWWAA KELRRTKKLS DYVGKNEKTK IIAKIQQRGQ GAPAREPIIS SEEQQLMLY 60
YHRRQEELKR LEENDDDAYL NSPWADNTAL KRHFHGVKDI KWRPR 105

(2) INFORMATION ON SEQ ID NO. 415:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 386 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 415:

AAELRDCGSR RISRSPSSNS HLSPRISLSG NLGPQTSRLG GPPSPSATWS VFWQLPRQQS 60
LPGRGSANLL PSVRSESAVL SDCVGGFPGR SSVRAWIAGP RCTEASPTRV LSLSWRLFNS120
ASLLLLLATST SGSECRFPRS PRARERGIPD CERLLVRRSC WRSGDPRPAG PAGHAAGAFS180
TPQYLGGTAM VLLHVKRGDE SQFLLQAPGS TELEELTVQV ARVYNGRLKV QRLCSEMEEL240
AEHGIFLPPN MQGLTDDQIE ELKLDKEWGE KCVPSGGAVF KKDDIGRRNG QAPNEKMKQV300
LKKTIEEAKA IISKKQVEAG VCVTMEMVKD ALDQLRGAVM IVYPMGLPPY DPIRMEFENK360
EDLSGTQAGL NVIKEAEAHG GGQPRS 386

(2) INFORMATION ON SEQ ID NO. 416:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 182 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 416:

GVEKAPAAWP AGPAGRGSPD RQQLRRTNSR SQSGIPRSLA RGERGKRHSL PEVDVAKSNS 60
 EAELKSRQLK LRTRVGEAGV HRGPAIQART ELRPGKPPTQ SERTADSERT DGRRFADPLP120
 GSDCCRGNCQ NTDQVAEGEG GPPNRLVWGP RFPLREIRGL RWELLDGERE IRREPQSRSS180
 AA 182

(2) INFORMATION ON SEQ ID NO. 417:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 467 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 417:

HTLSRWTKHS IPRWNDARTD DTWHSELDNR KIGQARNTLM DMRLSQVSDS VSGQTVVDPK 60
 GYLTDLNSMI PTHGGDINDI KKRLLLLKSV RETNPHHPPA WIASARLEEV TGKLQVARNL120
 IMKGTEMCPEK SEDVWLEAAR LQPGDTAKAV VAQAVRHLPQ SVRIYIRAAE LETDIRAKKR180
 VLRKALEHVP NSVRLWKAAY ELEEPEDARI MLSSRAVECCP TSVELWLALA RLETYENARK240
 VLNKARENIP TDRHIWITAA KLEEANGNTQ MVEKIIDRAI TSLRANGVEI NREQWIQDAE300
 ECDRAGSVAT CQAVMRAVIG IGIEEEDRKH TWMEDADSCV AHNALECARA IYAYALQVFP360
 SKKSVWLRAA YFEKNHGTRE SLEALLQRAV AHCPEAEVLW LMGAKSKWLA GDVPAARSIL420
 ALAFQANPNS EEIWLAAVKL ESENDEYERA RRLAKARTV PPPPGCS 467

(2) INFORMATION ON SEQ ID NO. 418:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 352 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 418:

TPGRWGHCPR LGQQPPGPLV LIILGLQLHG CQPDLLTVGV GLEGQGDAP CCRHIPQCPL 60
 GLGAHEPQHL CFGAVGHSPL QECFQGLPSA MVLLEVRGAQ PHTLLAGEHL QGVGVDSCT120
 LQGIYGYTTV SILHPGMLPI FLLNPNPNHG THDGLAGGHT PSPVTFLGIL DPLLTVDLHT180
 VGPQRGDGSV DDLHHLRVP IGFLQLSSRD PDMSVCNRVL PRLVQDLAIG FIGLQPCQSK240
 PELHAGGAAL HSSAQHDSI FRFFQLNGCF PQANRVWNML EGFFKNPLLC TNVRFQLCGS300
 DVNPDRLWEM TDSLGYHGLG CVPRLQPGCF QPDIFTLGAH LRPLHDKVPS YL 352

(2) INFORMATION ON SEQ ID NO. 419:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 424 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 419:

```

PPGAPFFLFF FFLTRDIKTF NEGGHSSSEPF HMRPNPAPRR PAMATAQSEG VLDAAGHQPK 60
DVPDLLLPVG DVLGHGAPQL PMPRLCTLTA LPHLLLLLLS AMLQLKLVEE GPGIPQVRVN120
LHSAVEPLPG LGDLPLTPKQ LGHGQEHMGV MTLTLLQGIHA LGPPLGPCLE EDGLRPQDTG180
VGALLQRLGH ECICDVLQPR TVLQPHGLQP QPRVLWVLQT RLFQNGPCSS KLPNLLLQPR240
EQKPQCGCVG TLLQPLVIGF PRLHLLLLL LDLPLHHPQL GEVLIVPQGL LAQILGCPDV300
VLHPLQLHRL HEHPGGGGTV RALASSLRAR SYSSFSDSSF TAASQISSLL GLAWKARARM360
LLAAGTSPAS HLDLAPMSHS TSALGQWATA LCRSASRDSR VWFEEFSKYAA RSHTLFLLLGN420
TCRA                                         424

```

(2) INFORMATION ON SEQ ID NO. 420:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 109 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 420:

```

GRTLPRGGGT VWVQGHGLEG WWAALSGSGF PAVGFLFWLL RLVYFLSLLP VTPGAPEYRL 60
FSPWAVSLSC FLTLLPGLLC VHLRLAWSKQ VRPLLLYSLV LFWHLVKLA          109

```

(2) INFORMATION ON SEQ ID NO. 421:

- (i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 177 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 421:

VSVPSSSAAG TLFQGLCGAP DAPHPLSKIP GGRGGGRDPS LSALIYKDEK LTVTQDLPVN 60
 DGKPHIVHFQ YEVEVKVSS WDAVLSSQSL FVEIPDGLLA DGSKEGLLAL LEFAEEKMKV120
 NYVFICFRKG REDRAPLLKT FSFLGFEIVR PGHPCVPSRP DVMFMVYPLD QNLSDED 177

(2) INFORMATION ON SEQ ID NO. 422:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 114 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 422:

ASRPYILELR EKDPCRPLAH RGSSTVGEQH QEHHRGPGTM CLQHWSWGHL LNGKILLSWV 60
 FIILGGSAGG GRRRRGEWVG GRVGGCGVAR AGRSLWAKSL SGRGRVPSSC LSER 114

(2) INFORMATION ON SEQ ID NO. 426:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 50 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 426:

PFCSSLAKLQ GIWGMWDLQF PAPASALSQV LTPAPASAPA PGRAPAPAAA

50

(2) INFORMATION ON SEQ ID NO. 427:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 114 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 427:

EDKMRPGLSF LLALLFFLGQ AAGDLGDVGP PIPSPGFSSF PGVDSSSSFS SSSRSGSSSS 60
RSLGSGGSVS QLFSNFTGSV DDRGTCQCSV SLPDNNFPVD RVERWNSQLI VISQ 114

(2) INFORMATION ON SEQ ID NO. 428:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 113 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 428:

EITMSCEFQR STLSTGKLLS GRETEHWQVP RSSTEPVKLE NNWDTEPPLP KLRLELEPDL 60
ELELKLELES TPGKELKPOL GIGGPTSPKS PAAWPRKNRR ARRNERPGLI LSS 113

(2) INFORMATION ON SEQ ID NO. 429:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 50 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: ORF
- (iii) HYPOTHETICAL: yes
- (vi) ORIGIN
 - (A) ORGANISM: HUMAN
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 429:

AAAGAGARPG AGAEAGAGVN TWERAEGAG NWRSHIPQIP CSLAKEEQKG

50

(2) INFORMATION ON SEQ ID NO. 430:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 224 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: ORF
- (iii) HYPOTHETICAL: yes
- (vi) ORIGIN
 - (A) ORGANISM: HUMAN
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 430:

QTQKVVTSPF RITLHWLLPC AAHPPDLHKK GQENSGCAPA TAHSAPPGRS PPELRAGLQR 60
 LARAVLPVSR FSAPQPPAAS FSGPRVAPSE ESGPGTSSNS GRLALPRLRS LCPLGVARPR120
 CCRALARCCC SSSERTAAWA RRAGSSSLAS PTSPTSDELQ AHFGQPAAVP RHRIPEHAAA180
 QPAGPRDHEG GAGAGRRLLD AGHEAVPPGH QEVPVLALRP RLPR 224

(2) INFORMATION ON SEQ ID NO. 431:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 408 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 431:

```
PALLGLPFIG SSLAPPTLQI CIKKAKKTLA VPQORLILLP RVGAPRSCAR ACSASPALSS 60
RCPASPRPSR RLPAFRGPEH HPAKRAGPGQ ARTPAASFPF GSAPSAPSGS RAHDAAGPWL120
AAAAALPRLAL LPGLGARALP LWPARLLLQA QNCKPIPANL QLCHGIEYQN MRLPNLLGHE180
TMKEVLEQAG AWIPLVMKQC HPDTKKFLCS LFAPVCLDDL DETIQPCHSL CVQVKDRCAP240
VMSAFGFPWP DMLECDRFPQ DNDLCIPLAS SDHLLPATEE APKVCEACKN KNDDNDNDIME300
TLCKNDFALK IKVKEITYIN RDTKIILETK SKTIYKLVGV SERDLKKSVL WLKDSLQCTC360
EEMNDINAPY LVMGQKQGGE LVITSVKRWQ KGQREFKRIS RSIRKLQC 408
```

(2) INFORMATION ON SEQ ID NO. 432:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 323 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 432:

```
VISFTFIFSA KSFLQSVSIM SLSSSFLLFQ ASHTFGASSV AGRRWSLLAR GMQRSLSWGK 60
RSHSSMSGQG KPKADMTGAQ RSFTCTQSEW HGWMVSSRSS RQTGAKSEHR NFLVSGWHCF120
MTSGIQAPAC SSTSFMVSWP SRLGSRMFY SMPWHSCRLA GMGLQFCACR RSRAGQRGRA180
RAPSPGSSAR RGRAAAASQG PAASWARDPE GAEGAEPGKG EAAGVRACPG PALFAGCDGSG240
PRKAGSRRLG RGEAGHREDS AGEALQARAQ LRGAPTRGSR MSRCWGTARV FLAFFMQIWR300
VGGAREEPMK GNPRRAGHYF LGL 323
```

(2) INFORMATION ON SEQ ID NO. 433:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 333 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 433:

```
RGRTWELFLA GRRVLVTGAG KGIGRGTVQA LHATGARVVA VSRTQADLDS LVRECPGIEP 60
VCVDLGDWEA TERALGSVGP VDLRGDCADM ELFLAGRRVL VTGAGKGIGR GTVQALHATG120
ARVVAVSRTQ ADLDSLVRER PGIEPVCDL GDWEATERAL GSVGPVDLLV NNAAVALLQF180
FLEVTKEAFD RSFEVNLRAV IQVSQIVARG LIARGVPGAI VNVSSQCSQR AVTNHVSVC240
TKGALDMLTK VMALELGPBK IRVNAVNPV VMTSMGQATW SDPHKAKTML NRIPLGKFAE300
VEHVVNAILF LLSDRSGMTT GSTLPVEGGF WAC 333
```

(2) INFORMATION ON SEQ ID NO. 434:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 210 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 434:

```
APGHNLRLHD DRTQVHLKGS VKGLLGDLQE GLQQGDSGVV HQQVHGAHAA QRPLGGLPVT 60
QVHAHGFYPR ALADKAVKIR LSPAHHHPR ARRVQRLDRA APYTFACPGD QHPAAREEQ120
HVGAVSAQVH GAHAAQRPLG GLPVTQVHAH GFYPRALADK AVKIRLSPA SHHPRARRVQ180
RLDRAAPYTF AC7GDQHPAA REEQ1PCSPT 210
```

(2) INFORMATION ON SEQ ID NO. 435:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 132 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 435:

```
FFFFFFFFFL GSRIRFIGGI GGRMSTAWGL RCVEGAQQAQ KPPSTGKVEP VVMPRLRSLR 60
KRMAFTTCST SANLP SGIRF SIVLALWGS QVAVPMDVIT TVGFTAFTRI LWGPSSRAIT120
LVSMSRAPLV EQ 132
```

(2) INFORMATION ON SEQ ID NO. 436:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 94 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 436:

KAKSWVPSDF RFQELPENTR SQRVIEWSLF CRDSWEYGHP APRCGNESSR SGEEALADVQ60
 LAAPVSNQLH PDGVEDRGVG GLLPELHAE PYLV 94

(2) INFORMATION ON SEQ ID NO. 437:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 70 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 437:

FSGVCFAGIA GSMATLLHDA VMNPAEVVKQ RLQMYNSQHR SAISCIRTVW RTEGLGAFYR60
 SYTTPSPISC 70

(2) INFORMATION ON SEQ ID NO. 438:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 98 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 438:

KAPNPSVLHT VRMQLIADRC CELYICKRCF TTSAGFITAS WSRVAILPAI PAKQTPENYP60
LRSGVLRKFL EPKIRRNPGI SFLRSKMYIQ SAQVSTDS 98

(2) INFORMATION ON SEQ ID NO. 439:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 270 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 439:

RSVVRRCCLKM AAEEPQQQKQ EPLGSDSEGV NCLAYDEAIM AQQDRIQQEI AVQNPLVSER 60
LELSVLYKEY AEDDNIYQQK IKDLHKKYSY IRKTRPDGNC FYRAFGFSHL EALLDDSKEL120
QRFKAVSAKS KEDLVSQGET EFTIEDFHNT FMDLIEQVEK QTSVADLLAS FNDQSTSOYLI180
VVYLRLLTSG YLQRESKFFE HFIEGGRTVK EFCQQEVEPM CKESDHIHII ALAQALSVSI240
QVEYMDRGEG GTTNPHIFPE GFRAQGLTLF 270

(2) INFORMATION ON SEQ ID NO. 440:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 145 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 440:

RWRRRLSSR SRSRWAATPK VLTVPMMKP SWLSRTEFSK RLLCRTLWCQ SGWSSRSYTR 60
SMLKMTTSIN RRSRTSTKST RTSARPGLTA TVSIGLSDSP TWRHCWMTAR SCSGSRLCLP120
RARKTWCPR SLNSQLRIST TRSWT 145

(2) INFORMATION ON SEQ ID NO. 441:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 210 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 441:

IAPSRLKQK TLGSEALRED VRIGGAALAA VHVLHLDGHA EGLGQRNDVD VVALLAHGLH 60
 LLLAELLDSP STLDEVLEEL ALALQVARGE QPQVDHKVVG GALVIEGGQQ VGDRGLLLHL120
 LNQVHERVVE ILNCFSEAL GHQVFLALGR HSLEPLQLLA VIQQCLQVGE SESPIETVAV180
 RPGLADVRVL FVEVLDDLLI DVIIFSILLV 210

(2) INFORMATION ON SEQ ID NO. 442:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 322 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 442:

NSERGRLOAM MTHLHVKSTE PKAAPQPLNL VSSVTLKSAS SEASPQSLPH TPTTPTAPLT 60
 PVTQGSPVIT TTSMTVGPI RRRYSKYNV PISSADIAQN QEFYKNAEVR PPFTYASLIR120
 QAILÉSPEKQ LTLNEIYNWF TRMFAYFRRN AATWKNVVRH NLSLHKCFVR VENVKGAVWT180
 VDEVEFQKRR PQKISGNPSL IKNMQSSHAY CTPLNAALQA SMAENSIPLY TTASMGNTPL240
 GNLASAIREE LNGAMEHTNS NESDSSPGRS PMQAVHPVHV KEEPLDPEEA EGPLSLVTTA300
 NHSPDFDHDR DYEDFPVND ME 322

(2) INFORMATION ON SEQ ID NO. 443:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 103 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 443:

FGTRAPASHD DPPACEVYRT QSCPSAPESG IKCHPLQVRI GGFSTELTSY SNOFNRPPDS 60
 RHRPLCHHN HQAHGGTHP QAVLRQIQRA HFVSRYCAEP RIL 103

(2) INFORMATION ON SEQ ID NO. 444:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 101 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 444:

SLSWKSGLW LAVVTKDRGP SASSGSRGSS LTCTGCTACI GDLPGLLSLS LLVCSIAPF 60
 SSSRIALAKL PRVGFPMNAV VYRGILFSAI EACKAALRGV Q 101

(2) INFORMATION ON SEQ ID NO. 445:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 539 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 445:

```
LDVQVKDDSR ALTGLALTLP LARLLTAPEL ILQWFQLSS SGPNSRLYMK LVMRILYLD 60
SEICFPTVPG CPGAWDVDSE NPQRGSSVDA PPRPCHTTPD SQFGTEHVLR IHVLEAQDLI120
AKDRFLGGLV KKGSDPYVKL KLAGRSFRSH VVREDLNPRW NEVFVIVTS VPGQELEVEV180
FDKDLKDDF LGRCKVRLTT VLNSGFLDEW LTLEDVPSGR LHLRLERLTP RPTAAELEEV240
LQVNSLIQTQ KSAELAAALL SIYMERADL PLRKGTKHLS PYATLTVGDS SHKTKTISQT300
SAPVWDESAS FLIRKPHTES LELQVRGEGT GVLGSLSLPL SELLVADQLC LDRWFTLSSG360
QGQVLLRAQL GILVSQHSV EAHSHSYSHS SSSLSEEPPEL SGGPPHITSS APELRQLRTH420
VDSPLEAPAG PLGQVKLTW YYSEERKLVS IVHGCRSLRQ NGRDPPDPYV SLLLLPDKNR480
GTRKRTSQKK RTLSPEFNER FEWELPLDEA QRRKLDVSVK SNSSFMSRER DCWGRCSWT 539
```

(2) INFORMATION ON SEQ ID NO. 446:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 99 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 446:

```
LLCLPAFVSL HHRLNVMSLK LGSKGRACAL QPFHLTGYS GLCLTKEKNR MFPLLHGLYP60
SGPLGRGPPEL AVSCFACTLF SLPPNSSGPS VSVPGWQH 99
```

(2) INFORMATION ON SEQ ID NO. 447:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 112 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 447:

VWIKLFTCST SSNSAAVGRG VRRSRRCRR PDGTSSRVSH SSRKPLFKTV VRRTLHLPRK 60
 SSLSKSLSKT STSSSWPGTD VTITSKTSFQ RGLASSRTTW LRKLRPANFS LT 112

(2) INFORMATION ON SEQ ID NO. 451:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 56 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 451:

FFFFFFVETGF RHVDETGLEL LASSDLPPQL LKVLGLYRHE PLSLALKRFS QRPSVR 56

(2) INFORMATION ON SEQ ID NO. 452:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 56 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 452:

IRFGISCPGP GISLQEPLPL CWRHSFRIRR RREKRKCKGG RSFPGRITISV THMDPR 56

(2) INFORMATION ON SEQ ID NO. 453:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 57 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF
- (iii) HYPOTHETICAL: yes
- (vi) ORIGIN
 - (A) ORGANISM: HUMAN
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 453:

VTEMVRPGKD LPPLHFLFSL LLLILKLCLO QRGSGSCREI PGPGQEMPNI IYLTEGL 57

(2) INFORMATION ON SEQ ID NO. 454:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 80 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: ORF
- (iii) HYPOTHETICAL: yes
- (vi) ORIGIN
 - (A) ORGANISM: HUMAN
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 454:

ILAFWRAAPL WHHQTLLCFP STWNSSNIRG CEGLAILLSW VHVSDRNGAA WERSPSFTFS60
LLPPPPYSKT VPPTGQGLL 80

(2) INFORMATION ON SEQ ID NO. 455:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 182 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: ORF
- (iii) HYPOTHETICAL: yes
- (vi) ORIGIN
 - (A) ORGANISM: HUMAN
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 455:

ARLPLLAAED RGQPGSVKDP KMAGRKLALK TIDWVAF AEI IPQNQKAIAS SLKSWNETLT 60
SRLAALPENP PAIDWAYYKA NVAKAGLVDD FEKKFNALKV PVPEDKYTAQ VDAEEKEDVK120
SCAEWVSLSK ARIVEYEKEM EKMKNLIPFD QMTIEDLNEA FPETKLDKKK YPYWPHQPIE180
NL 182

(2) INFORMATION ON SEQ ID NO. 456:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 76 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 456:

AQSIAGGFSG KAALEVRVS EQDFRELAMA FWFWMISAK ATQSMVERAS FRPAILGSFT60
 DPGCPRSSAA SNGSRA 76

(2) INFORMATION ON SEQ ID NO. 457:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 104 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 457:

CPECVIQGPE LPPGLNFINS QLVGEANRDT FSCLIWFLGK LHSSPQWSSD QMELSSSSSP 60
 SLSHILQSWP LRETPTQHKI SHLLFLRHPP GQYIYPLARE PSAH 104

(2) INFORMATION ON SEQ ID NO. 458:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 223 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 458:

```
RGAGGHQGES GRPEGWPPPF LHPRGRFQVP WLESVLIVVS NNIDEEALAR LAQEGSEVNV 60
IGIGTSVVTC PQQPSLGGVY KLVAVGGQPR MKLTEDPEKQ TLPGSKAAFR LLGSDGSPLM120
DMLQLAEEPV PQAGQELRVW PPGAQEPCTV RPAQVEPLL R LCLQQGQLCE PLPSLAESRA180
LAQLSLRSLR PEHRRLRSPA QYQVVLSERL QALVNSLCAG QSP 223
```

(2) INFORMATION ON SEQ ID NO. 459:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 157 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 459:

```
VIRVVSSQPR SESQGDPAH RLFTRACSLR DSTTWYCAGL RSRLCSGLSR LRDSWAKALD 60
SARDGSGSHS CPCWRQSRSS GSTWAGLTVQ GSWAPGGHTL SSCPACGTGS SANCSMSMSG120
DPSEPRSRKA ALLPGNVCFS GSSVSFIRGW PPTATSL 157
```

(2) INFORMATION ON SEQ ID NO. 460:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 93 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 460:

```
PPLFPHLLFL WGVSDSCCF QSAPLRVSGG LPRTQTVHQG LQPLGQHHLV LCRAPQPPVL60
RAESAQQQLG QGSRLCQWE RLTQLSLLEA EPQ 93
```


(2) INFORMATION ON SEQ ID NO. 461:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 328 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 461:

```

FSLILCKHSI GDRKNYASAK LSELLPEEVE AEVKAAAEIS MGTEVSEEDI CNILHLCTQV 60
IEISEYRTQL YEYLQNRMM IAPNVTVMVG ELVGARLIAH AGSLLNLAKH AASTVQILGA120
EKALFRALKS RRDTPKYGLI YHASLVGQTS PKHKGKISRM LAAKTVLAIR YDAFGEDSSS180
AMGVENRAKL EARLRTLEDR GIRKISGTGK ALAKTEKYEH KSEVKTYDPS GDSTLPTCSK240
KRKIEQVDKE DEITEKKAKK AKIKVKVEEE EEEKVAAAAE TSVKKKKKRG KKKHIKEEPL300
SEEEPTSTA IASPEKKKKK KKKRENEE                                     328

```

(2) INFORMATION ON SEQ ID NO. 462:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 124 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 462:

```

YNRNSFLLIL VLSLFFLFLL FLWTSNCCAG TWFFLRKWFF LNVFLFTPFL LLLHRCFFFF 60
CHFFFFLFFN FNFNLGFFGF LFSNFILFIY LFYFAFFRTG WKCGVTRIV SLHFTFVFIF120
FCFC                                             124

```

(2) INFORMATION ON SEQ ID NO. 463:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 101 amino acids
 - (B) TYPE: Protein

(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 463:

SSFSLFFFFFF FFFSGLAIAV LVHGSSSESG SSLMCFPLPL FFFFFFFDVSS SSATFSSSSS 60
STLTLILAFL AFFSVISSSL STCSILRFLE QVGSVESPEG S 101

(2) INFORMATION ON SEQ ID NO. 464:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 427 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 464:

GGSSRRHGGG YAAVALLVLL LLGPGGWCLA EPPRDSLREE LVITPLPSGD VAATFQFRTR 60
WDESELQREGV SHYRLFPKAL GQLISKYSLR ELHLSFTQGF WRTRYWGPPF LQAPSGAELW120
VWFQDVTVDV DKSWKELSNV LSGIFCASLN FIDSTNTVTP TASFKPLGLA NDTDHYFLRY180
AVLPREVVCT ENLTPWKLL PCSSKAGLSV LLKADRLFHT SYHSQAVHIR PVCARNARCTS240
ISWELRQTLS VVDFAFITGQ GKKDWSLFRM FSRTLTEPCP LASESRVYVD ITTYNQDNET300
LEVHPPPTTT YQDVILGTRK TYAIYDLLDT AMINNSRNLN IQLKWKRPPE NEAPPVPFLH360
AQRVSGYGL QKGELSTLLY NTHPYRAFPV LLLDTVPWYL RLLHPLPACP GPAATPPP420
ADSAAGQ 427

(2) INFORMATION ON SEQ ID NO. 465:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 128 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 465:

SPSILYGSCT CHSHKAFGGP DTGGHPSCR P HQVQSCGSGS KTLSLMWINL GRSSVMSSQG 60
SSAPLSTSSST PPTQSLPLPP SNPWWPMTL TTTFCAMLCC RGRWSAPKTS PPGRSSCPVV120
PRQASLCC 128

(2) INFORMATION ON SEQ ID NO. 466:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 124 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 466:

PQAWRRRLCRC CSAREVPAPGA RRLVPCRTPT RQFAGGTCHH PAAFRGRSRH IPVPHALGFG 60
ASAGRSVPLQ ALSQSPGAAD LQVFSTGAAP VIHTRLLEDP ILGATLPAGP IRCRAVGLVP120
RHCH 124

(2) INFORMATION ON SEQ ID NO. 467:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 106 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 467:

FLHKTHNRAV EEAKEPFLCL CSRTERGPLA SVSLLVLPGL YQALRRGMET PHSGAWLGEG 60
EAAGVLWASR GYNLSSLGNV CPFVGSSPTR RGTQLYTGTI CVWSVL 106

(2) INFORMATION ON SEQ ID NO. 468:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 164 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 468:

```
ISTKQTTTHRL SQCKVESPDV SDYCLQMDTR SPESSDYTLE KPKEPLPPPL PQARPQSGAF 60
PYPASRPGTV REEPAGSRWP EGLSQSYRGR IKRAPLLPPQ PCCESCAGIN LRNSPEAETG120
LMPWERSECE PMAFSLGNTN LPKYVKAEGD RDLAEGRKSF SSRN 164
```

(2) INFORMATION ON SEQ ID NO. 469:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 108 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 469:

```
EIRGRPPLEF PPLSCVDEFL QNRPHDCPS VKLSPPTCRT TAYKWTHVPQ RAQIIPSRSP 60
KNPCRLPFEPK PGPRVGRFHT PPQGLVQSGK NQQAHAQORA SLSPTTEA 108
```

(2) INFORMATION ON SEQ ID NO. 470:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 317 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 470:

```
NMVDYYEVLG VQRHASPEDI KKAYRKLALK WHPOKNPENK EEAERKFKQV AEAYEVLSDA 60
KKRDIYDKYG KEGLNGGGGG GSHFDSPF EF GETFRNPDDV FREFFGGROP FSFDFFEDPF120
EDFFGNRRGP RGSRSRGTGS FFSAFSGFPS FGSGFSSFD T GFTSFGSLGH GGLTSFSSTS180
FGGSGMGNFK SISTSTKMVN GRKITTKRIV ENGQERVEVE EDGQLKSLTI NGVADDDALA240
EERMRRGQNA LPAQPAGLRP PKPPRPASLL RHAPHCLSEE EGEQDRPGAP GPWDPLGVRS300
RIERRWQEEE AEAERGV                                     317
```

(2) INFORMATION ON SEQ ID NO. 471:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 123 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 471:

```
SMPLVQLPSS FKLLSLLLLL PLATFFQSCC GRRGGPRARV PQVGPARPPP QRDSEARVSA 60
ARQAGAASAG GGRQAGLAGR SGLSACAPQR GHRRRP HLL LRTLGHLLQ LLLFLDRSRQ120
FSL                                     123
```

(2) INFORMATION ON SEQ ID NO. 472:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 105 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 472:

KIRSNQCLWS NFLPPSNSSL CFCFFLLPPS FNPAADAEGV PGPGCPRSVL LALLLRETVR 60
RVSQQRGRPG RLRAEAGRL GWQGVLASPH ALLSEGIVVG HTIYC 105

(2) INFORMATION ON SEQ ID NO. 473:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 159 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 473:

IVSERSLRSL WTAHWALPEM DSRIPYDDYP VVFLPAYENP PAWIPPHERV HHPDYNNELT 60
QFLPRTITLK KPPGAQLGFN IRGGKASQLG IFISKVIPDS DAHRAGLQEG DQVLAVNDVD120
FQDIEHSKAV EILKTAREIS MRVRFPPYNY HRQKERTVH 159

(2) INFORMATION ON SEQ ID NO. 474:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 75 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 474:

PPTGRPPBFF FFFFFFFSIY FYFLGERLGG GRGENSVSLE SQKCMNLLVV QGWDKMAREV60
RWKIPKILFA TDFYN 75

(2) INFORMATION ON SEQ ID NO. 475:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 97 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 475:

LGGLSSSDVK SQLSSRRLQ CDGSGQKLGQ LIVVVRVVYP LMRNPCWRI LIGRQENHRV60
 VIIRNPAVHL GQGPVGPQR PQTPLTNSV WEPEADA 97

(2) INFORMATION ON SEQ ID NO. 476:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 274 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 476:

GHLWRPAGGR LPRHHDQVCR AAEPHRGGGL CGHQRRLEPHR PRVQEGWGLC PHESLHQVPA 60
 DRPWHEPGAG CAADCEDPHR RPGACEPGAP PAARAAGLGR GTRHGNGDIL SFEDANRAMQ120
 TGVGTGIMIAR GALLKPWLET EIKEQRHWDI SSSERLDILR DFTNYGLEHW GSDTQGVEKT180
 RRFLLEWLSF LCRYDPVGLL ERLPQRINER PPYYLGRDYL ETLMASQKAA DWIRISEMLL240
 GPVPPTSPSC RSTRPRTSS LRLSQGHPGA RRVQ 274

(2) INFORMATION ON SEQ ID NO. 477:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 256 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 477:

```
AGPAPVQPGP HTRCRCPRGH GSRGRSQAGK LWCPAGPRRP GTSTPPSSPV RTCGPLTDED 60
VVRLRPCEKK RLDIRGKLYL APLTTCGNLP FRRICKRFGA DVTCGEMAVC TNLLQGQMSE120
WALLKRHQCE DIFGVQLEGA FPDMTKCAE LLSRTVEVDF VDINVGCPID LVYKKGGGCA180
LMNRSTKFQQ IVRGMNQVLD VPLTVKIRTG VQERVNLAHR LLPELRDWGV ALVTEMGTS240
HLRMPTAPCR LVSPGS 256
```

(2) INFORMATION ON SEQ ID NO. 478:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 165 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 478:

```
NLLYSRPRV PLGKPEATCT RWPCASARRR GGGHWPKEHL ADADPVGCLL AGHQRLQVVA 60
AQVVGRPLVD PLWEPLQPH GIVPAQEGQP LEQKAPGLLH ALRVRAVLQ AVVGEVPQDV120
QALGRRDVPV PLLDLREEP RLEQGATGNH DPGDTS LHGA VGILK 165
```

(2) INFORMATION ON SEQ ID NO. 479:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 262 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 479:

```
GSPMSPARAM QTLFVPEHGD HGAGVCSDDH HRGGHVPAEP LQAVCTVLHQ PAQPGAEERR 60
CPVLRRMPVA SETQCQATES QSRSLTPRLG PPTAWPCALR PAERFPPLPA QCLLHVQLQT120
LFVPEHGDHG AGVCSDDHHR GGHVPAEPLQ AVCTVLHQPA QPGAEERRCP VLRRMPVALG180
EHSVRQRNPR AAGLRPASAH RPPGRAALRP AGALPPLPAH LSVPAARDRP AAHHLAVRRG240
GAPTLPGPLD LQSGGPRGGV GN 262
```

(2) INFORMATION ON SEQ ID NO. 480:

(i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 270 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 480:

```
AAQCLLHVQC KRSLFQSMET TELEFVQIII IVVVTCLLSH YKLSARSFIS RHSQGRRED 60
ALSSEGCLWP RRHSVRQRNP RAAVLRPASA HRPPGRAPFA QRSVFHRCQP NVSCTCNCKR120
SLFQSMETITE LEFVQIIIIV VVTCLLSHYK LSARSFISRH SQGRREDAL SSEGCLWPSE180
STVSGNGIPE PQVYAPPRPT ORLAVPPFAQ RERFHRFQPT YPYLQHEIDL PPTISLSDGE240
EPPPYQGPWT FKVRDPEEEL EIERGLGAET 270
```

(2) INFORMATION ON SEQ ID NO. 481:

(i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 124 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 481:

```
ATTSC LHGPS SAGTARGGGE KMPCPQKDAC GPRRAQCQAT ESQSRSTPR LGPPTAWPCR 60
PSPSGSASTA SSPPIRTCST RSTCRPPSRC QTGRSPHPTR APGPSRFGTF RRSWKLNWDW120
VRRP 124
```

(2) INFORMATION ON SEQ ID NO. 482:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 99 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 482:

RVLVSPLSLS MWRWKVEKDT VSILKLLRFS ERGRHLNRQV GFSVLSALGI WREMGLLSLC60
 TQEGHALKTV FVDQRRLYST GGIQMSLRGR EETWQADYI 99

(2) INFORMATION ON SEQ ID NO. 483:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 104 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 483:

VLEEEKKHKGK QITSEPFELC FSFFPCLFSK IYLNLETQDI FLGNLLPMSE VASAASRQIP 60
 GNPEPQNVIP PGSAWPDVPL SAGFTYQSHS SFSINTPKSS PNHH 104

(2) INFORMATION ON SEQ ID NO. 484:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 123 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 484:

```
KLDSTQCRPS LHTNMYVLLS ECHLLCTQCH DSKIKISVSN QNINQARNSW AQRGVRGLSY 60
TAVKQPTCSA HSQAESDWSC RQRGGGRVLC CPLLCMVSWV FQGGQLLSPN KTVNSLRTGP120
LPH 123
```

(2) INFORMATION ON SEQ ID NO. 485:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 303 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 485:

```
LGRKPSWVGG AGLEPSQGS G LSHHPAPQSD SAPTSPPPIG EPGPQREVDK WGGSLGRPES 60
SGHPGRTPAT CCHCAVMAR SGSATPFARA PGAPPRSPQ RLVQDVSGPL RELRPRLCHL120
RKGPQGYGFN LHSDKSRPGQ YIRSVDPGSP AARSGLRAQD RLIEVNGQNV EGLRHAENVVA180
SIKAREDEAR LLVDPETDE HFKRLRVPTPT EEHVEGPLPS PVTNGTSPAQ LNNGSACSSR240
SDLPGSDKOT EDGSAWKQDP FOESGLHLSP TAAEAKEKAR AMRVNKRAPQ MDWNRKREIF300
SNF 303
```

(2) INFORMATION ON SEQ ID NO. 486:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 149 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 486:

```
APRRRPRRRR LEPCESTSAR HRWTGTGSVK SSATSEPLPA CLGTLGPLPH GPWASACPEL 60
PQPQWTGGWS CHCPEISPS GEPPSCPCPP GTGGLWQQOR GRETQRCERE SETETERERE120
RHRERQRESE RARGSRGARA FAALPGPAD 149
```

(2) INFORMATION ON SEQ ID NO. 487:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 217 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 487:

```

FLNGNRTTLQ STEAGGARGR LRPKVRAGGV PGSRDRQEGA QKLLKISRFL FQSICGARLL 60
TRMARAFSLA SAAVGLRWRP LSWKGSCFQA LPSSVSLSEP GRSLRDEHAE PPLSWAGLVP120
LVTGDGRGPS TCSSVGVTRS RLKCSSVSGS TTSSRASSR ALMLATTS AW RSPSTFCPFT180
SMRSWARRP ERAAGEPGST ERMYPGRDL SLCRLNP                                217

```

(2) INFORMATION ON SEQ ID NO. 488:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 298 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 488:

```

EIRAVGGGVC VDGMGTPGEG LGRCSHALIR GVPESLASGE GAGAGLPALD LAKAQREHGV 60
LGGKLRQRLG LQLELPPEE SLPLGPLLGD TAVIQGDTAL ITRPWSPARR PEVDGVRKAL120
QDLGLRIVEI GDENATLDGT DVLTGREFF VGLSKWTNHR GAEIVADTFR DFAVSTVPVS180
GPSHLRGLCG MGGPRTVVAG SSDAAQKAVR AMAVLTDHPY ASLTLPDAAA ADCLFLRPGL240
PGVPPFLLHR GGGDLPSNQE ALQKLSDVTL VPVSCSELEK AGAGLSSLCL VLSTRPHS 298

```

(2) INFORMATION ON SEQ ID NO. 489:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 175 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 489:

```
AGHRYQGDIR ELLQCLLAGV QIPTSTVQEE RGHTRQPRTK KETVSSCVIW EGQGGIWVIC 60
QHCHCPDSSL GSVAAACHNS ARSPHAAETA QVGGTRDWHS GDGEVPERVR HDLSSSVIGP120
FGEAYEKLPA GEENVSAIQR RVLVSYPHNS EPQVLQGFAD SIDLWPTSGA PGPRD      175
```

(2) INFORMATION ON SEQ ID NO. 490:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 150 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 490:

```
LGPCPLGSRP CRQAAVPAAM TPQVAVLA AVPVVASVYLP APRAPFELWP DPEREGQPPH 60
LPPTPGSLGL PGSGHGSSGP APPPASPSHP HRLPLQPLGF LSFLVSSPVS SGHPHSCRAV120
ISAGAPPPED RVGGEGPSRL QASGTGSSGF.                                150
```

(2) INFORMATION ON SEQ ID NO. 491:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 89 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 491:

FVKRTKQPRQ TLDAPCSALR LWGRCLLGEA VAQGVHCEAG PVDSAGGIHL ASGCLVSVYS60
DIAFCCHLSC GQRGVSWHEN IFFFKCGSF 89

(2) INFORMATION ON SEQ ID NO. 492:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 63 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 492:

LTHLLFEKCL LPSLGLITKF DHDHIVVSQS ALEIVSGLHE VAMGVWSTLK LYQSCTYFQT60
FLK 63

(2) INFORMATION ON SEQ ID NO. 493:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 73 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 493:

DGSRMLCHYI QKQDNKLNG CPLQSQQVQP HSARPELQPL PKGIFPTAST PSKEHQGFVS60
VVLFFLQTID IYS 73

(2) INFORMATION ON SEQ ID NO. 494:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 318 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 494:

KCATFWSFPR RQGGLGIAIS EEDTLSGVII KSLTEHGVA T DGR LKVG DQ ILAVDDEIVV 60
 GYPIEKFISL LKTAKMTVKL TIHAENPDSQ AVPSAAGAAS GEKKNSSQSL MVPQSGSPEP120
 ESIRNTSRSS TPAIFASDPA TCPPIPGCET TIEISKGR TG LGLSIVGGS D TLLGAI I IHE180
 VYEEGAACKD GRLWAGDQIL EVNGIDLRKA THDEAINVLR QTPQVRVLT L YRDEAPYKEE240
 EVCDTLTIEL QKKPGKGLGL SIVGKRNDTG V FVSDIVKGG IADADGR LMQ GDQILMVNGE300
 DVRNATQEA V AVWIKVFP 318

(2) INFORMATION ON SEQ ID NO. 495:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 206 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 495:

SAFAEMGSDH TQSSASKISQ DVDKEDEFGY SWKNIRERYG TLTGELHME LEKGHSGLGL 60
 SLAGNKDRSR MSVFIVGIDP NGAAGKDGR L QIADALLEIN GQILYGRSHQ NASSIIKCAP120
 SKVKIIFIRN KDAVNQMAVC PGNAVEPLPS NSENLOKET EPTVTTS DAA VDLSSFKNVQ180
 HSGASQGGRG VWVLLSAKKI HSVES S 206

(2) INFORMATION ON SEQ ID NO. 496:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 119 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 496:

TSWIIMAPSS VSEPPTMLRP SPVRPLEISM VVSQPGIMGQ VAGSEAKIAG VDDLLVFRMD 60
SGSGEPDCGT IRDWELFFFS PLAAPAAEGT AWESGFSAWM VSFTVIFAVF RRLINFSIG 119

(2) INFORMATION ON SEQ ID NO. 497:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 71 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 497:

SAPSLTKCRS THVYPLSLIM FMSGGSSRST LRRMVPTPST TSLSPRSSSS TSKLLTQSGP60
SLPQPPASRP F 71

(2) INFORMATION ON SEQ ID NO. 498:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 139 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 498:

SRSPACGASE HGDGAMSLIC SISNEVPEHP CVSPVSNHVY ERRLLIEKYIA ENGTDPINNQ 60
PLSEEQQLIDI KVAHPIRPKP PSATSIPAIL KALQDEWDAV MLHSFTLRQS CRQPAKSCHT120
LCTSTMPPAV SLPVSPRKL 139

(2) INFORMATION ON SEQ ID NO. 499:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 74 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 499:

TTGRERGCRP CAGLFYCFLF LMKLDHCLQN PAQALLPIPF TVSLVRRAMT RQAASCWYRA60
CDSSWRVVCS SGAE 74

(2) INFORMATION ON SEQ ID NO. 500:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 71 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 500:

FSFFNETRSL LTKPCTSPPA HPLHSSLGSA SPVSQELQQN GCGTATTTSI ERQEGRGAVG60
LVQGGFIVFF F 71

(2) INFORMATION ON SEQ ID NO. 501:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 284 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 501:

```

EARGLATRTR SGAAAHAGDR FTDADDVAIL TYVKENARSP SSVTGNALWK AMEKSSLTQH 60
SWQSLKDRYL KHLRGQEHKY LLGDAPVSPS SQKLKRKAE DPEAADSGEP QNKRTPOLPE120
EEYVKEEIQE NEEAVKKMLV EATREFEEV VDESPPDFEI HITMCDDDP TPEEDSETQP180
DEEEEEEEK VSQPEVGAAI KIIRQLMEKF NLDLSTVTQA FLKNSGELEA TSAFLASGQR240
ADGYPIWSRQ DDIDLQKDDE DTREALVKKF GAQNVARRIE FRKK 284

```

(2) INFORMATION ON SEQ ID NO. 502:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 123 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 502:

```

ETFSSSSSSS SSGCVSESSS GVGSSSSHIV ICISKSGGLS STTTSSNSRV ASTSIFLTAS 60
SFSWISSFTY SSSGKSGVLL FCGSPLSAAS GSSSAFRLSF WEEGLTGASP SRYLCSWPRR120
CLR 123

```

(2) INFORMATION ON SEQ ID NO. 503:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 175 amino acids
 - (B) TYPE: Protein

(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 503:

VFLRCGWIII THSYMYFKIR RALIHNNLLK LPGGFHKHLF DCFFILLDFF LHILFFRQIW 60
SSLILWFPAI RGLRVLLRLP LELLGGGAHR RVPQQVLMML APQVLEVAVL QGLPRVLRER120
ALLHRFPQGV TGDGAGRAGI FLHVGKDGIV VRIREAIARV RCRSAPRARR QAPGF 175

(2) INFORMATION ON SEQ ID NO. 504:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 78 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 504:

CPPEKSLQMF QPLSSPDSHR KGTGFGLGIV FSLTFFKRRM WPLAFGSGMG LGMAYSNCQH60
DFQAPYLLHG KYVKEQEQ 78

(2) INFORMATION ON SEQ ID NO. 505:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 95 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 505:

SKTSTLPVAI WTRQRLEHLQ GFLGWTSITR ILSSRPHPD TGPTSCRAFT QTCSPPPAPPA60
 FLSAGPRAPT PESLARAGNK SQVRKAGADA PDIAR 95

(2) INFORMATION ON SEQ ID NO. 506:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 156 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 506:

AIPNPMPEPK ANGHILLKK VSEKTIPNPK PVFPLWLSGL DRGWNICRDF SGGHQLPGFY 60
 LHDRIQTPV PLPAELRLRH VPHPRQLSS RPAPALRPLK VSRELETSPR SGRQAQTLQI120
 SRDDPLLPSL PVFSVGRQGD AVVWRLEVTL TLGCAY 156

(2) INFORMATION ON SEQ ID NO. 507:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 169 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 507:

AASGMLGSWP ARTFHGACV SRRPSAPWKH TASGKDSPDL RFSEHGVSQE FWAGGLVAVL 60
 EMTSPSPWG TQEGPAGMCS LWVVGWPCR GAGVRDLVLV HAGVWCKHVC AVQRDACES120
 RTPAPPRKGG AVTSVLCFL IKTFPLFSYK FASCKQVHKD PPLVKSGFE 169

(2) INFORMATION ON SEQ ID NO. 508:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 155 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 508:

TQNTGNRSF PGWRWCAALS TRVSLYSTYM FTPHTCVDEH QITHPSSTTG TPADYPQAAH 60
 SGRALLGAPR GGARGHLQHC HQAASPEFLG NTVLGKPKVR AVLPRGRVLP GCGGPAADTG120
 PRVEGPGRPA SKHARRSLGE PGSVASSLLS LRSPI 155

(2) INFORMATION ON SEQ ID NO. 509:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 148 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 509:

ENRGNVLIKN KHKTLVTAPP FLGGAGVRLS PHASLCTAHT CLHHTPAWTS TRSRTPAPRQ 60
 GHQPTTHRLH IPAGPSWVPH GEGLGVISST ATRPPAQNSW ETPCSENRRS GLSFPEAVCF120
 QGAEGRRLTQ APGWKVLGQ LPSMPDAA 148

(2) INFORMATION ON SEQ ID NO. 510:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 75 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 510:

NAYISGYERD FMTIQSNITL ADRETEVFHD LPSLPASLRQ NWIPTLVFFL PFTSFSLLYN60
VLRDQNSHQN RLFLR 75

(2) INFORMATION ON SEQ ID NO. 511:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 67 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 511:

FRDTEGLLAL MTFWMGLQLM TILILEERTL LIFSPIALLR RSTSYSESLH IPLVFLQAPE60
PLVQMLY 67

(2) INFORMATION ON SEQ ID NO. 512:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 101 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 512:

IEFFFFFFFF PLRHLENNCR NPKELASNLE VVSEAAGWLD WAQPLSCLNR PRNGIMMTMR 60
TSILSSSHCV YYVFSFNKAF VPMALLEGGR LKECVVILSK M 101

(2) INFORMATION ON SEQ ID NO. 513:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 179 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 513:

FGTMGGISDP DTLHIWKTNS LPLRFWVNIL KNPQFVFDID KTDHIDACLS VIAQAFIDAC 60
 SISDLQLGKD SPTNKLLYAK EIPEYRKIVQ RYYKQIQDMT PLSEQEMNAH LAEESRKYQN120
 EFNTNVMAAE IYKYAKRYRP QIMAALEANP TARRTQLQHK FEQVVALMED NIYECYSEA 179

(2) INFORMATION ON SEQ ID NO. 514:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 179 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 514:

DRGAPALTPG HLHPLPPVPR SVSGMEAREL VRLPHLPSTA CTVPTHLLHN VQLVLLPRAP 60
 CIQAAKHKLG ERRPPARRLQ PRNSTSSTLV QGALLELTFD WFLQLPKCY LHFFLTRRGS120
 WPQTVSSSVR FLLLGRLLE WAVPAPWGAL WASPGARVE GRDGGHRSWE PRLQEKERG 179

(2) INFORMATION ON SEQ ID NO. 515:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 200 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 515:

```
SGDRWEGMEV PRGQGGGAPV SESSPSSCPR PSRLCSVFPS LSHRHGVEDQ VEAQWASISP 60
SSSLTNSPCV SGLTVALVDV VLHQSHLLK LVLQLCPPGR GVGLQRGHD L RPIPLGVLIN120
LCHGHIGVEL ILVFPRLGQ MGIHLLLAER RHVLDLLVVA LHDLPVLRNL LGVEELVGWR180
ILAQLQVRDG AGVDEGLRDD                                     200
```

(2) INFORMATION ON SEQ ID NO. 516:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 157 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 516:

```
TSMEALLFRL FKLPTTLRC IGLRRPLVTH TLRRKCEHKA SRLCHGGCCC TLEPCVGRHR 60
DWDLERGKSS AKTGGEHGR RTAAARGGSE RVLGHRRRD PDAGGLRGQD GEALQHRGWH120
IPGSETLPGR GGHVPWPRPG RRRPHMCGF WDSQSLA                                     157
```

(2) INFORMATION ON SEQ ID NO. 517:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 401 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 517:

RTRCAGSVNT KPPGFVMAAA AARWNHVWVG TETGILKGVN LQRKQANFT AGGQPRREEA 60
 VSALCWGTGG ETQMLVGCAD RTVKHFSTED GIFQGQRHCP GGEGMFRGLA QADGTLITCV120
 DSGILRVWHD KDKDTSSDPL LELRVGPGVC RMRQDPAHPH VVATGGKENA LKIWDLQGSE180
 EPVFRAKNVR NDWLDLRVPI WDQDIQFLPG SQKLVTCTGY HQVRVYDPAS PQRRPVLETT240
 YGEYPLTAMT LTPGGNSVIV GNTHGQLAEI DLROGRLLGC LKGLAGSVRG LQCHPSKPLL300
 ASCGLDRVLR IHRIQNPRGL EHKVYLKSQL NCLLLSGRDN WEDEPQEPQE PNKVPLEDTE360
 TDELWASLEA AAKRKLSGLE QPQALQTRR RKKKRPGSTS P 401

(2) INFORMATION ON SEQ ID NO. 518:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 222 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 518:

SWEKLYVLVP DGNPQVQPI PHVLGPEHRF LRALQVPYLQ SILFPTCGNH MGVCWVLAHP 60
 THPRAHSQFQ EWVRGCVLVL VMPDSENPRI HTCDEGAVGL GEATEHALPA RAVSLTLEYA120
 ILGAEVLHRP VRAAHQHLGL AAGAPTQGAH CLLAPRLSSG REVRRLFSLK IYPFQDPSLG180
 ADPHMVPACS SSRHDKAWRL CVHTSGAACA SPAGVEVRCT AV 222

(2) INFORMATION ON SEQ ID NO. 519:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 86 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 519:

DPRPVSLTL ALLPRCHFLS SSVKYRLHIL SLNASTICVT PKDFWDFDET CEGEDTEKPV60
 ICKHLLLFPH HLWDISAVVS KWQIIN 86

(2) INFORMATION ON SEQ ID NO. 520:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 77 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 520:

ISSVNYHMTI QAQYKLGHCI LCGWISVAVF LTSPKKTSCR AELLVQAPDN DAPDFAFWGL60
 SLLLSHFLKL FAWPWHH 77

(2) INFORMATION ON SEQ ID NO. 521:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 71 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 521:

CGNKSCLQI TGFSVSSPSQ VSSKSQKSLG VTQIVLALSD KMCSLYLTEE ERKWHLGSSA60
 RVSKETGLGS Q 71

(2) INFORMATION ON SEQ ID NO. 528:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 120 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 528:

LTYLSTTTTT PFLGRSLGFI RSVGTLEPSE APPSHGVGDS GGRGNPSEHP GGCWWSMYFA 60
LPHLFHGVPC QGQALICGEG SKQRRRPFRG GERAAPRTP SPAHDIPEKE TKIKPRGLST120

(2) INFORMATION ON SEQ ID NO. 529:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 90 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 529:

PLLKGKKLSA ALTNLSFFFF FFFFGKKPW LYSLCGDTVP FRGPSQPWGG GQWWAWESQR60
ASWRVRLHV FCSSPSFPWG PLPGSSTNMW 90

(2) INFORMATION ON SEQ ID NO. 530:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 96 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 530:

NKAPGPFYVG APLKYGMVVG REAVAQSL S PDYQLWGGFQ GARSRLGSSS HRHVGGGRKY60
LQGGTVSEEQ DGRGFSACYG ILFKEMGVKP GTVAHA 96

(2) INFORMATION ON SEQ ID NO. 531:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 497 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 531:

```
TPALVQRFRE GGSGAPEQAE CVELLLALGE PAEELCEEFL AHARGRLEKE LRNLEAELGP 60
SPPAPDVLEF TDHGGSGFVG GLCQVAAAYQ ELFAAQGPAG AEKLAAFARQ LGSRYFALVE120
RRLAQEQGGG DNSLLVRALD RFHRLRAPG ALLAAAGLAD AATEIVERVA RERLGHHLQG180
LRAAFLGCLT DVRQALAAPR VAGKEGPGLA ELLANVASSI LSHIKASLAA VHLFTAKEVS240
FSNKPYFRGE FCSQGVREGL IVGFVHSMCQ TAQSFCDSPG EKGGA TPPAL LLLLSRLCLD300
YETATISYIL TLTDEQFLVQ DQFPVTPVST LCAEARETAR RLLTHYVKVQ GLVISQMLRK360
SVETRDWLST LEPRNVRAVM KRVVEDTTAI DVQVGLLYEE GVRKAQSSDS SKRTFSVYSS420
SRQQGRYAPS YTPSAPMDTN LLSNIQKLF S ERIDVFSPVE FNKVSVLGTI IKISLKTLAG480
SVCGLRTFLA LCGLQQG                                     497
```

(2) INFORMATION ON SEQ ID NO. 532:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 153 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 532:

```
CGSGWSWPHW PATRPGQGPP SQPREVLPA P GGRLSGSPGR PPGDPAGGGP GARGPLVPRS 60
PWQRLRARQR PAGPREPASA GGSGPAPAPA VSCHHHHPAPA PAAAPPAQNS GCPAAGRPP120
ASRHLLGPGP QTAPGRPPPP GRGRPRSHCL HGR                                     153
```

(2) INFORMATION ON SEQ ID NO. 533:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 221 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 533:

YDQALHLHV GQPPRRFP LCTQRAHGRH WELILHQKLF ISESEDVGDG GRLVVQAEAG 60
 EQQEQRWCG TPLLPRVAE ALSRLAHRVD EAHDEALTD LTAELTPEVG LVGEGHLFGG120
 EKVHCCQRL NVAQDGAGHI GQQLGQARAL LPSHARCCQR LADVCQAAQE GRPETLQVVA180
 QALAGHSFHD LRGSVCEPGS GQQGPGSPQA PVEAVQRPHQ Q 221

(2) INFORMATION ON SEQ ID NO. 534:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 52 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 534:

PSILIPMTPG GFFSVMVRAK TGSTHRCSPA VYPLMRRI PC WRILIGRQET TG

52

(2) INFORMATION ON SEQ ID NO. 535:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 38 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF
- (iii) HYPOTHETICAL: yes
- (vi) ORIGIN
 - (A) ORGANISM: HUMAN
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 535:

AGKKPPASHH KESGCPSRPS PTGHSTPPSD PLTDNSVW

38

(2) INFORMATION ON SEQ ID NO. 536:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 55 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: ORF
- (iii) HYPOTHETICAL: yes
- (vi) ORIGIN
 - (A) ORGANISM: HUMAN
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 536:

SGCVPSHEED SMLEDHRQA RNRHLVIIRN PVVHLGQAPL ATPHRPQIRS LTIQS

55

(2) INFORMATION ON SEQ ID NO. 537:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 113 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: ORF
- (iii) HYPOTHETICAL: yes
- (vi) ORIGIN
 - (A) ORGANISM: HUMAN
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 537:

TRGPRKRLRR SGRRGGLRSW AGRERVLGTA LLGIYIVFPR IPGSGSEEAV TPYDRRLDLS 60
RNSPQAPAGQ STTSSSFCFC DGLSRGLKH TVSIDCIRFV QKPGQLTESH FLA 113

(2) INFORMATION ON SEQ ID NO. 538:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 101 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 538:

```
EPADSQARGR QCLLLHQQVQ GIWLKACIFP GHKLPEPLKW EARQFQTNLF STHHSTFKVC 60
LLLLPVHPPS LQFFHSLTSE RVPGGSMVKN LTCMLQKKKK K                               101
```

(2) INFORMATION ON SEQ ID NO. 539:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 198 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 539:

```
YSLCSQCVSA PLTLNRHRSR RKRKWWIAQL EPGDCYDCLD LCGHRASQPP QTLSLECGGT 60
QCRFPGGLSP RPSPCPPSSS GLLFYRFFLV SFLGLLFTEG TAALGFLVTS ALLGSDGSAS120
ASWDLGGMGT MASTQMSWKM APRKSPYRSR FSRKVGSGTS GGEKSRSEAM AQVACCLTSL180
LTHHSLEPTP APPRRSPR                               198
```

(2) INFORMATION ON SEQ ID NO. 540:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 147 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 540:

```
KKNSSALIFL EEAADFGCQI SLRNGHFLRC FFLTESVDKL IKRLSHFKIT PKSSSTVFFF 60
FSFCFKITNQ VRSPTSSSMN SFVTELLSVC SPHCALNTVS AAPVCPLFRK ESIFNTFTIC120
TPWNLHMLTS YYKPTHPLS SGTGHPL 147
```

(2) INFORMATION ON SEQ ID NO. 541:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 138 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 541:

```
KNDRFPWTSI PGLKGALIKL FTEHVAEKHI YGLMPLLEA QSTPFQVTPS TMANIVKGLY 60
TLRPEWVQMA PTLFSKFIPN ILPPAVESEL SEYAAQDQKF QRELIQNGFT RGDQSRKRAG120
DELAYNSSSA CASSRGYR 138
```

(2) INFORMATION ON SEQ ID NO. 542:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 179 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 542:

KACIPSDQSG FRWLQLYFLN LFQTFSLRRW NLNFLNMLLK IRNFKENLYR MVLQGVTSPP 60
 RELGMSWLII ARQHVVQVPGG TDSECIEYAF LPEKRTHWSC RDCIQSTVGA AHTQELCHKA120
 VHGRGOWTST LVCNFKTKTK KKKNSAARLG GDFEMGQSTW EFTYRCEEN ASQAVTISK 179

(2) INFORMATION ON SEQ ID NO. 543:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 92 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 543:

IQFLEAAFAV FLHCMRFGNE CRNLLWAFTF LCQFGFYCLN LMLTWRGDGG QCCCGASSES60
 VCGELCCADV AVGGQVRGSA PSWKKSCLRV YV 92

(2) INFORMATION ON SEQ ID NO. 544:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 99 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 544:

KPNWHRKVNA HSKFLHSFPN RIOCKKTAKA ASRNCIYWPL PEQQAAMPAP WPPELDACCA60
 DVLTLRMLG YGSDSEEIHL SYSSLERSSC VFNMKHFIW 99

(2) INFORMATION ON SEQ ID NO. 545:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 96 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: ORF
- (iii) HYPOTHETICAL: yes
- (vi) ORIGIN
 - (A) ORGANISM: HUMAN
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 545:

QSQNTKVEFP IRIYTDPLTK VLLIMQFASS PSSWLGSSPI WHDHIKRTPS DMISSKKVPS60
 LLPDHQRPHQ HNTTLRIQIH CWPHNSTVPH LLSRSA 96

(2) INFORMATION ON SEQ ID NO. 546:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 108 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: ORF
- (iii) HYPOTHETICAL: yes
- (vi) ORIGIN
 - (A) ORGANISM: HUMAN
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 546:

GRDAGQSEPW LSTSGCCAWG GCAPGARGCW GPGPPSLGVG RKPGRVSAS SVPERWIAWS 60
 PRPSEASATF RGAPKSILTA RLWASAWRPQ HRGSQNERPW SSSMKTSG 108

(2) INFORMATION ON SEQ ID NO. 547:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 117 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 547:

PGRRAKRAMA VYVGMLRLGR LCAGSSGVLG ARAALSRSWQ EARLQGVRFI SSREVDMMVS 60
TPIGGLSYVQ GCTKKHLNSK TVGQCLETTA QRVPEREALV VLHEDVRLTF AQLKEEW 117

(2) INFORMATION ON SEQ ID NO. 548:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 117 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 548:

PLLLELGKGQ PDVFMEDDQG LSFWDPLCCG LQALAHSLAV KMLFGAPLNV AEASDGRGDH 60
AIHLSGTEEA DTLPQGFELPT PREGGPGPQH PRAPGAQPPQ AQHPDVDSHG SLCPASR 117

(2) INFORMATION ON SEQ ID NO. 549:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 68 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 549:

RLSGPAANPR GAAGWRAAGA QELGMSYKPM RPWLPSSTPW SARHPLGPGA PRFPDREACA60
CAVRGCSV 68

(2) INFORMATION ON SEQ ID NO. 550:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 68 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 550:

GHCSPARRTR TPPCQGTGVP RAPGGAWQTR GCCWAARGAW VCRTSPTPGR QRHASRPLL60
GWLGRGSA 68

(2) INFORMATION ON SEQ ID NO. 551:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 68 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 551:

DTAAPHGARA RLPVREPGCP GPQGVPRPG GAAGQPGAHG FVGHPQLLGA SGTPAGRSSG60
VGCGAAQP 68

(2) INFORMATION ON SEQ ID NO. 552:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 32 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 552:

SPISITETQQ FSNLIHTIT CLLRMALYLF SL

32

(2) INFORMATION ON SEQ ID NO. 553:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 33 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 553:

ITLQPISQNM FLLNNTQLF YLCVLFMPDH QYQ

33

(2) INFORMATION ON SEQ ID NO. 554:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 43 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 554:

SFYFGWSHYN ENKYNAILNR QVMVCIKLLL NCCVSVIDIG DQA

43

(2) INFORMATION ON SEQ ID NO. 555:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 85 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 555:

CFTHWNVFFR LWMTSFLMER VQEGWKTPGF KLSIPHMGFS IIFRPEAARP EVRLHLSALF60
VLLLATLGFL LGTMC GCGMC EQKGG 85

(2) INFORMATION ON SEQ ID NO. 556:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 106 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 556:

FNDGKTWQLK KTLVTNGGFL LFFPHPPFCS HMPQPHMVPS RNPKVARST KRADKCRRTS 60
GRAASGLKMI EKPMWGMLSL NPGVFHPSWT LSIRKEVIHN RGKTFQ 106

(2) INFORMATION ON SEQ ID NO. 557:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 109 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 557:

NINYIEIIFL FLLISPLGP HRLSPAQLAQ LAQLAHSPQV SRRHRALTMV GWHGVSNNAN 60
SSHHPHPS SQRPLVVGPA VFQKGLTCTN LRQTYAPFSV SLASPSWED 109

(2) INFORMATION ON SEQ ID NO. 558:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 50 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 558:

LGIFVAYRNQ LGVPSLMRCS WKAIYARGGF TCVAPPFIDP SAFKKLECEN

50

(2) INFORMATION ON SEQ ID NO. 559:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 44 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 559:

FRLPFLTWHF CSLQEPWCT FSYEMQLESH LCKRWFHFCR SSIH

44

(2) INFORMATION ON SEQ ID NO. 560:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 45 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 560:

RVNEWRSDKS ETTSCINGFP AASHKRRYTK LVPVSYKNAK LRMGV

45

(2) INFORMATION ON SEQ ID NO. 561:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 34 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 561:

MRSRLPCEGL VARHPRELRV PSVRFWIDWP WVLT

34

(2) INFORMATION ON SEQ ID NO. 562:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 67 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 562:

VSTHGQSIQK RTEGTRSSRG CRATSPSHGN RLLIQESFPQ NPPRARFQGH PLGRQSRQQP60
FTEAMSQ 67

(2) INFORMATION ON SEQ ID NO. 563:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 50 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 563:

APMASQSRSA LRARVAHAGA VPPALHTAID SSFRNHFLKT HQGLGSKGTR 50

(2) INFORMATION ON SEQ ID NO. 564:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 54 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 564:

YSIIFEQFFK CKSVSYSECV SEVIKDISQR YWPISLCNQR NSVSRLLLCV ICGS 54

(2) INFORMATION ON SEQ ID NO. 565:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 57 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 565:

CTMVNVDNTV SFLSSFLNVN LYLTQSVCLK LLRTFPNVTG PFPEVIRGIL FQDYCCV 57

(2) INFORMATION ON SEQ ID NO. 566:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 49 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 566:

EKCQPHSLIL LWPFFNFIK SHRSHTTIIL KQSSDYK GK WASNVGKCP

49

(2) INFORMATION ON SEQ ID NO. 567:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 94 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 567:

GEGRVWNPEG SKSRHWPDHP APWAPSPRQE QLFSIPSQTS SIFITMTFRE VSQASSRCPT60
IPSGGKRQEN SPRVPVMLLS PSQFRLSRTS YLQP 94

(2) INFORMATION ON SEQ ID NO. 568:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 89 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 568:

GLTLKKGTFF RGPEIQADPN LTPCSRTQAH RPLNSNPTSP PPPPTPDFLI SWNAFQDWKS60
PQGSSEPILS PARISSMHPG HAFHISRNK 89

(2) INFORMATION ON SEQ ID NO. 569:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 89 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 569:

DVLDLNLWDG ESSMTGTRGE FSCLEFPPEGI VGHLELAWET SLKVIVIKIE LVWEGMENS60
SCLGLGAQGA GWSGQCLDLL PSGFHTRPS 89

(2) INFORMATION ON SEQ ID NO. 570:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 73 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 570:

KSIAHSVIGY FHDFKWFYEE TESSDDVEVL TLKKFKGDLA YRRQEYQVEF NIWCLKWALV60
 LSV MAYVNNS VPS 73

(2) INFORMATION ON SEQ ID NO. 571:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 40 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 571:

SADSQEIQRR PGLQTTRVSG RIQHMVLEVG SCFISYGICK

40

(2) INFORMATION ON SEQ ID NO. 572:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 60 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 572:

NKSPLQAPYV E FYLILLSSV GQVSFEFLES QHFNIITAF C FFIKPLEIMK IAYYRVSYAF60

(2) INFORMATION ON SEQ ID NO. 573:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 318 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 573:

GNLSLES LCN LYNWRYKNLG NLP HVQLLPE FSTANAGLLY DFQLINVEDF QGVGESEPNP 60
YFYQNLGEAE YVVALFMYMC LLGYPADKIS ILTTYNGQKH LIRDIINRRC GNNPLIGRPN120
KVTTVD RFQG QQNDYILLSL VRTRAVGHLR DVRRLVVAMS RARLGLYIFA RVSLFQNC FE180
LTPAFS QLTA RPLHLHIPT EPFPTTRKNG ERPSHEVQII KNMPQMANEV YNMYMH LIQT240
THHYHQ TLLQ LPPAMVEEGE EVQNQETELE TEE EAMTVQA DIIPSPTDTS CRQETPA FER300
ESRPGGEGAI ALGGLGCF 318

(2) INFORMATION ON SEQ ID NO. 574:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 67 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 574:

KTPKPPQRNC PFPTGAALTL KGWSFLTAAG VCWTGYDVSL NSHGLFFCFQ LCFLILNFLT60
 LFYHSRW 67

(2) INFORMATION ON SEQ ID NO. 575:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 155 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 575:

SLMIMMCSLY QMHVHVYKV CHLGHIFYYL YFMRWSLSIL SSSWERFCWN YMQMKGASCE 60
 LTESWSQFKT VLEEGYSGED IKSKSGSRHG HYQATDIPQM AHCPGSYQRK KNIVILLTLK120
 SINSCHLVWS SNQWIVSTSS IDDVANKMLL AIICC 155

(2) INFORMATION ON SEQ ID NO. 576:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 57 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 576:

DHLGFISTKM RTNHGVRKGS LEEHKNLKA LGGYHYIISYF HRSDLAKLCI LSLLTFI 57

(2) INFORMATION ON SEQ ID NO. 577:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 48 amino acids
- (B) TYPE: Protein

(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 577:

CSF CCILCKKTAN R GKRTLQIKT ILVSFPQR

48

(2) INFORMATION ON SEQ ID NO. 578:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 48 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 578:

LYFFKTLKEK CVLFAASFVR RLPTEEKGLY KLRPSWFH FH KDENKSWC

48

(2) INFORMATION ON SEQ ID NO. 579:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 48 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 579:

GSFPNTMICS HLCGNETKMV LICKVLFPLL AVFLQRMQQK EHIFLSKF

48

(2) INFORMATION ON SEQ ID NO. 580:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 48 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: ORF
- (iii) HYPOTHETICAL: yes
- (vi) ORIGIN
 - (A) ORGANISM: HUMAN
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 580:

HCRIQLGLSP LVGREKTTQV MRNFYSFQEL EEQLLIKFA LVTKYFYS

48

(2) INFORMATION ON SEQ ID NO. 581:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 59 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: ORF
- (iii) HYPOTHETICAL: yes
- (vi) ORIGIN
 - (A) ORGANISM: HUMAN
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 581:

IMPRAPLYRI PLNCNYVLLK SQLVKEELMV SVFVGNTCNT AEFYKGELLW WAGKKPLKS 59

(2) INFORMATION ON SEQ ID NO. 582:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 44 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 582:

GTLRPRSSDV LPIYLCFTTC LLSLTPNIPT YFSNSACHKF AASP

44

(2) INFORMATION ON SEQ ID NO. 583:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 46 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 583:

NVDSQCQTHSL ALIPPLLSSS DIVNNDKQLL CTECFMCCS HFIHMY

46

(2) INFORMATION ON SEQ ID NO. 584:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 41 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 584:

LYMCIKCEQH IKKHSVHSSC LSLLTISLLE RRGGIRARLC V

41

(2) INFORMATION ON SEQ ID NO. 588:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 112 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 588:

GKPLVLHATP LSRCLPLHP TRSLILRPSL HLDPSFHHY LQRCSYYAPV YRGCPMTVP 60
 SQSNYSSGPK VWLSRAPLPR RGRPFQALPG WNWCRSLGC IVRPGVGVAS LL 112

(2) INFORMATION ON SEQ ID NO. 589:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 76 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 589:

GRSREAPAGW PKSTKPPSAR ENPWFSMPHL SPGALCLFTP QEALSYVLLS IYRTPVSITI60
 SRDVAIMRPS TGGARR 76

(2) INFORMATION ON SEQ ID NO. 590:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 97 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 590:

AGLDQKEELR GVRQHQHQGV RYTRGSSDTS SSPEGLGMAC HAGAMERVKA KPWDPKSNLT60
AKAPSSSGTP CRRAHNSYIS GDSOGNWGPI DGEKDVG 97

(2) INFORMATION ON SEQ ID NO. 591:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 63 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 591:

NGARLTSQPQ LYQRNHFIQI SQHFQNTNV YGRVNIRSEN PLEEISVSMF IISAFRGLPV60
WAK 63

(2) INFORMATION ON SEQ ID NO. 592:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 50 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 592:

NGSFGTVGAV MSTWLHKNP YEFTVKFNY TCVTADFGGR QGLGLPFYLS

50

(2) INFORMATION ON SEQ ID NO. 593:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 55 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN

- (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 593:

AYLFIFLKGGK NTFTFSSSPE AQTLTYLTTS QLTPLCDHQC GVVRLKDDSG HMTSL

55

(2) INFORMATION ON SEQ ID NO. 594:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 41 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN

- (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 594:

SGDVCTESHC GLSRVKEKEQ QELSLGRWRR GGIDQARPWP W

41

(2) INFORMATION ON SEQ ID NO. 595:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 47 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 595:

FKVGLWKGGDI VEGEAVLYT YKWYTPFIHG GQRSSDQVTY VQKVTVA

47

(2) INFORMATION ON SEQ ID NO. 596:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 44 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 596:

SVLTTSQRLS SHEFSQIPTR AKVLLDLFHP FSTSLSSTLA APSP

44

(2) INFORMATION ON SEQ ID NO. 597:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 1651 base pairs

(B) TYPE: Nucleic acid

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

(A) ORGANISM: HUMAN

(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 597:

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GAGCTGCCAA GCAGCCCACC TCCTGGGCTT CCCGAAGTGG CCCCAGATGC AACCTCCACT 60
GGCCTCCCTG ATACCCCCGC AGCTCCAGAA ACCAGCACCA ACTACCCAGT GGAGTGCACC 120
GAGGGGTCTG CAGGCCCCCA GTCTCTCCCC TTGCCTATTC TGGAGCCGGT CAAAAACCCC 180
TGCTCTGTCA AAGACCAGAC GCCACTCCAA CTTTCTGTAG AAGATACCAC CTCTCCAAAT 240
ACCAAGCCGT GCCCACCTAC TCCCACCACC CCAGAAACAT GGGGGGGGGG GGGGGGGGGG 300
GCGCCGTCAT CTA CTCTTG TTCAGCTCAC CTGACCCCTT CCTCCCTGTT CCCTTCCTCC 360
CTGGAATCAT CATCGGAACA GAAATTCTAT AACTTTGTGA TCCTCCACGC CAGGGCAGAC 420
GAACACATCG CCCTGCGGGT TCGGGAGAAG CTGGAGGCCC TTGGCGTGCC CGACGGGGCC 480
ACTTTCTGCG AGGATTTCAG GGTGCCGGGG CGCGGGGAGC TGAGCTGCCT GCAGGACGCC 540
ATAGACCACT CAGCTTTCAT CATCCTACTT CTCACCTCCA ACTTCGACTG TCGCCTGAGC 600
CTGCACCAGG TGAACCAAGC CATGATGAGC AACCTCACGC GACAGGGGTC GCCAGACTGT 660
GTCATCCCCT TCCTGCCCCCT GGAGAGCTCC CCGGCCCAGC TCAGCTCCGA CACGGCCAGC 720
CTGCTCTCCG GGCTGGTGCG GCTGGACGAA CACTCCCAGA TCTTCGCCAG GAAGGTGGCC 780
AACACCTTCA AGCCCCACAG GCTTCAGGCC CGAAAGGCCA TGTGGAGGAA GGAACAGGAC 840
ACCCGAGCCC TGCGGGAACA GAGCCAACAC CTGGACGGTG AGCGGATGCA GCGGCGGCA 900
CTGAACGCAG CCTACTCAGC CTACCTCCAG AGCTACTTGT CCTACCAGGC ACAGATGGAG 960
CAGCTCCAGG TGGCTTTTGG GAGCCACATG TCATTGGGA CTGGGGCGCC CTATGGGGTC 1020
AGAATGCCCT TTGGGGGCCA GGGGCCCCTG GGAGCCCCGC CACCCTTTCC CACTTGCCCG 1080
GGGTGCCCCG AGCCGCCACC CCTGCACGCA TGGCAGGCTG GCACCCCCC ACCGCCCTCC 1140
CCACAGCCAG CAGCCTTTCC ACAGTCACTG CCCTTCCC GCAGTCCCCC CTTCCCTACG 1200
GCCTCACCCG CACCCCTCA GAGCCAGGG CTGCAACCCC TCATTATCCA CCACGCACAG 1260
ATGGTACAGC TGGGGCTGAA CAACCACATG TGAACCGA GAGGGTCCCA GCGCCCGAG 1320
GACAAGACGC AGGAGGCAGA ATGACCGCGT GTCCTTGCTT GACCACCTGG GGAACACCCC 1380
TGGACCCAGG CATCGGCCAG GACCCCATAG AGCACCCCG TCTGCCCTGT GCCCTGTGGA 1440
CAGTGGAAGA TGAGGTCATC TGCCACTTTC AGGACATTGT CCGGGAGCCC TTCATTTAGG 1500
ACAAAACGGG CGCGATGATG CCCTGGCTTT CAGGGTGGTC AGAACTGGAT ACGGTGTTTA 1560
CAATTCCAAT CTCTCTATTT CTGGGTGAAG GGTCTTGGTG GTGGGGGTAT TGCTACGGTC 1620
TTTTAATTAT AATAAATATT TATTGAATGC T

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(2) INFORMATION ON SEQ ID NO. 598:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 3304 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN

(C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 598:

AAACCCCTCTT GGCTGTCTGC TGTCCAGGGA GTCGCCACTC CCTTCATTAT AGCCTTGCTC 60
 AGAGTGCAGC GGCAGGCCTG GGGATGGCCT CGGGAGAGGG ACCACAGAGC ACCAGCCTGC 120
 ATGGAACCTC CTTCTCACT CAGCTTCCCA CGTTGCCAGC TGGGACAGGG GAGATGGAGT 180

AATTTTGCTG TGGAAAGACT TCACGTCTTG CCGAATGAAA GTCCCGCCTG TCTGTCACGC 240
 TGATGCCCGT GCAGCTGTCT GAGCACCCGG AATGGAATGA GTCTATGCAC TCCCTCCGGA 300
 TCACTGTGGG GGGCCTTCCT GTGCTGGCGT CCATGACCAA GGCCGCGGAC CCCCCTTCC 360
 GCCCCGCTG GAAGGTGATC CTGACGTTCT TTGTGGGTGC TGCCATCCTC TGGCTGCTCT 420
 GCTCCACCG CCGGCCCCCC GGCAGGCCCC CCACCCACAA TGCACACAAC TGGAGGCTCG 480
 GCCAGGCGCC CGCCAACTGG TACAATGACA CCTACCCCT GTCTCCCCCA CAAAGGACAC 540
 CGGCTGGGAT TCGGTATCGA ATCGCAGTTA TCGCAGACCT GGACACAGAG CCAACCGCCC 600
 AAGACGAAAA CACCTGGCGC AGCGACCTGA AAAAGGGCTA CCTGACCCTG TCAGACAGTG 660
 GGGACAAGGT GGCCGTGGAA TGGGACAAAG ACCATGGGGT CCTGGAGTCC CACCTGGCGG 720
 AGAAGGGGAG AGGCATGGAG CTATCCGACC TGATTGTTTT CAATGGGAAA CTCTACTCCG 780
 TGGATGACCG GACGGGGGTC GTCTACCAGA TCGAAGGCAG CAAAGCCGTG CCCTGGGTGA 840
 TTCTGTCCGA CGGCGACGGC ACCGTGGAGA AAGGCTTCAA GGCCGAATGG CTGGCAGTGA 900
 AGGACGAGCG TCTGTACGTG GCGCGCCTGG GCAAGGAGTG GACGACCACT ACGGGTGATG 960
 TGGTGAACGA GAACCCGGAG TGGGTGAAGG TGGTGGGCTA CAAGGGCAGC GTGGACCACG 1020
 AGAACTGGGT GTCCAACCTAC AACGCCCTGC GGGCTGCTGC CGGCATCCAG CCGCCAGCTA 1080
 ACCTCATCCA TGAGTCTGCC TGCTGGAGTG ACACGCTGCA GCGCTGGTTC TTCCTGCCGC 1140
 GCCGCGCCAG CCAGGAGCGC TACAGCGAGA AGGACGACGA GCGCAAGGGC GCCAACCTGC 1200
 TGCTGAGCGC CTCCCCTGAC TTCGGCGACA TCGCTGTGAG CCACGTCGGG GCGGTGGTCC 1260
 CCACTCACGG CTTCTCGTCC TTCAAGTTCA TCCCCAACAC CGACGACCAG ATCATTGTGG 1320
 CCTCAAATC CGAGGAGGAC AGCGGCAGAG TCGCCTCCTA CATCATGGCC TTCACGCTGG 1380
 ACGGGCGCTT CTTGTTGCCG GAGACCAAGA TCGGAAGCGT GAAATACGAA GGCATCGAGT 1440
 TCATTTAACT CAAAACGGAA ACACCTGAGC AGGCCATCAG GACTCAGCTT TTATAAAAAC 1500
 AAGAGGAGTG CACTTTTGTT TTGTTTGTT CTTTGTGAA CTGTGCCTGG GTTGAGGTC 1560
 TGGACAGGGA GCCAGTCCC GGGCCCCATA GTGGTGCGGG CACTGGACCC CCGGGCCCCA 1620
 CGGAGGCCGC GGTCTGAACT GCTTTCCATG CTGCCATCTG GTGGTGATTT CGGTCACTTC 1680
 AGGCATTGAC TCAAGGCCTG CCTAACTGGC TGGGTCGTTT CTTCCATCCG ACCTCGTTTC 1740
 TTTCTTTCC TATGTTCTTT TGTTCACTGA ATATCCCTAG AGCTCCTACC ATATGTCAGG 1800
 CCTATGCCT CACCCTGAGA ACGCAGTGAG CATGAGGTGG ACCTGTTTGC TGGGAACCCC 1860
 AGGTACACCC CTTTCTTCC CAAACTTGGT GCCTTGGAAG AATCAGGTCC AGCCCTGAAG 1920
 ATCCTTGGGG AAGAAAATGT TTATGTTGCA GGGTATTGCA TGGTCACGAG TGAGGGGCGA 1980
 GCCCTGGGG GACACATCTG CCCACAGCTG CACAGGCCAG GGGCACAGGC ACATCTGTTG 2040
 GTTCTCAGGC CTCAGATAAA ACCATCTCCG CATCATATGG CCAGTGACCG CTTTCTCCCT 2100
 TCAAGAAAAT TCTGTGGCTG TGCAGTACTT TGAAGTTTTA ATTATTAACC TGCTTTAATT 2160
 AAAGCAGTTT CTTTCTTAT AAAGTGAAT CACCAAATCT TATCACACAG AGCACAGTCC 2220
 TGATGTTACC CAGCCCGCTC CAGCAGTGCG GGAGATTGTA AGGAAGCGGT GCGGCTGGT 2280
 GAAGCAAGTC TCACATGTCG GCGTTCTTGG CCAATGGATA CAAAGATAAA GAAAATGTTG 2340
 CCTTTTCTA GGAAGTGTCA GAAATCCTCA TGCCTTTCAA GACTTCTGTG AATGACTTGA 2400
 ATTTTATTAT CCCTGCCTAG GGTCTGTGAA CGAGGCCTGT CTCTTCCCTG GGGTTTCTTT 2460
 CCATGGCCTT TATTTCTCCT CTTCCAGTGG GAGTTTGTCA GGCTCTTCTC TGTGGAACT 2520
 TCACGAGCGT TGGCTGGGCC TCGGCTTCCG TGGAGTGTAC TCCAGGGTGA AGGCAGAGTG 2580
 GGATTTGAGA CCCAGGTTAG GCACGACCCA GGCTGAGAAG GGACGTTTCC ATCATTACA 2640
 GTGCCCTCCC CACAGCAACT ACCTCACCCC GACCCCCACC CTCACCTCTA CCCCACCCCG 2700
 CGATCGTCAG GGGTGCCACG GTGGGCCGGA GGGTGCCGGC TCTGGCTGTC CCTGTGCCGG 2760
 TCCCTCACAA ACCTCTCCCC CTTTGAAACT CAAGCACAGC TGCGAGGAGG GCAGCGAGGA 2820
 GGGACCCCTC TCTCATGGTT GTCTCTTTCC CCCGCTATGT CATAGGTAGT GGAGGAAGCG 2880
 AAGGAAGTGA ACGCTGAATG TGACGCATTT CTGAAGAGCT CAGCTGTCAC CGGGCATAGC 2940
 CTGGAAGCCC CAAGTCTGTT CTGACTTTGC CTGGCTGTCT CTTGACCCG CCTCCTAGAT 3000
 CATGTCTCCT GATGTCCAGG CTGGGTCAAT TAAATAGAG ATGCAATCAG GAAGGTTGGG 3060
 GGACTTGGGA CTGTGGCTGA ATTGAGACCT TGCTGATGTA TTCATGTCAG CACCTGAGTC 3120
 ACAGCCCAGG TGCCCGGAAG CAGCCTCTTC GCATAGGCAG TGATTTGCGA TTAATTTAAA 3180
 GCTCACCTTT TTTCTTCCCC TCTCTGTTCC CTGCTGTCAG CATAATGATT GTGTTCTTCC 3240
 CCTATGGGAT CCATCTGTTT TGTAAACAAT AAAGCGTCTG AGGGAGTGTA AAAACAGAT 3300
 GGAT

(2) INFORMATION ON SEQ ID NO. 599:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 878 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 599:

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GCGGCCGCGC CAGTCTCGCT TCATGACGCA GCCGGTGACC TTCGACGAGA TCCAGGAGGT 60
GGAGGAGGAG GGGGTGTCCC CCATGGAGGA GGAGAAGGCC AAGAAGTCGT TCCTGCAGAG120
CCTGGAGTGC CTGCGCCGCA GCACGCAGAG CCTGTCGCTG CAGCGGGAGC AGCTCAGCAG180
CTGCAAACCTG AGGAACAGCC TGGACTCCAG CGACTCCGAC TCGGCCCTGT AAGGGGCGCC240
GCCC GCGGGG GGGACGCGCG CGTCCGCGGT CCGCGCGGGG ACCGGCGTGT GAACCCCGAG300
AGTGCCCGCG CCCTGCTCCC GGGGGACCCG CAAGGACCCG GGACCGCCGC TCCTCGCGCG360
CTCGGACTCC CGCCCCGCTG CGAACC GGTC GGTGCGCCCC TCGCCGCGCT CGCCCTGGCC420
CGGGAGCGCC GGGAGCGGGG CCGCTTTCCT CGTCCTTGTA AATGTTTATT TTTAACTCT480
TCCCAGTGCG AACTCTGCTG TGAGTGTGTG CGGGGAGGCG CGCCCGCGCT GAGTCGGCGG540
CGGGTAGCCA CTCCATGCCC TTGTCCGATG GTTTGCAACT CCGATTTTGC ACACCGCTCC600
ACCGTGCCCC CCAGCGCACA CCCATT CACA CTCACGCCAA CACTCTCGCT GAACACTTTT660
ATAATTGTTA GCGGTGGCCG TTGGGACTTT GGGCGCAGCG CGGCTGCTAC TGGCTCTGGA720
GGATTGATAT TTATTTTTCG ATTGCGATGG CTGAAGGCAT TTATTTAACG ATCTTTTAC780
CTGGATATGT CTGTGAGGCT CCTGAAAGGA GACAAATAAA GTCAATATAT TTGCACAGTG840
CAAAAAAAAA AAAGAAAGAA AAGAGAAGGT TCGAGAAA

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878

(2) INFORMATION ON SEQ ID NO. 600:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 2760 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual
ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 600:

CACCCAACCT	GTGTTGTTGC	CGCCCGGCC	TTNCTCCAC	AGNTCTNCTT	NCTNCCGCCC	60
GGCACTTCTG	TGGACCCCTT	NTTAGTTTAC	AGGCACGGNT	GGGGCCGGTC	TGTGCTGGCG	120
NCTGCTGGCC	ACTGAGGGAC	AGGGACACGT	GCCACCTGCT	CATCTCTGCC	CTGAGGTCAC	180
CCCGTGGTCC	CTCCACGTGC	CCATCTCTCT	GCAGTGCCCT	CCTCGCCTGT	GCAGCCCGCC	240
CACCCACAGG	CTCACCCCTC	CTGCCGGCTG	CCAGAGGCCC	CCTCCAGCAG	GGCCTCTCTC	300
CGTNGCCCCA	GCTTCACTCT	CTCCCTCAGC	ACCTGCCCTG	CTGGAGGCCC	CAGCCCTCCG	360
TGGACAGCAG	GGGCCACGTG	GAGCCCGGGC	CGCTACCCCG	CCACCCAGTG	CTGGCCGCCT	420
TCTTGGTGCC	AAACCCCTT	CCCCACCCA	GAGACTGGGC	AGCTGTGTCT	GGTTCGTTCT	480
TTGCACTAAC	CACATTTGTC	ATCTTAGGG	CAGGCTGGGG	CTGCGGGCTG	AGGGGGACCG	540
CTGGACCCCC	CCTTCCCTCC	CTTCTTGTT	CCATTTCCAT	CCATGACAGG	TACAGCATCC	600
CAGGAGCCCC	GCCTGAGGGG	CTGGACCCGA	GCCGGCTGTG	AACATCCCTC	AGCCCTGCTT	660
GTCCCCCCTT	GGGACTAACC	ACTAACCTCA	CCCCAAACT	CCACGGGTGC	CCCTAGCTGG	720
CCCAGAGCCG	GCAGTGTGAG	CCCAAGTCCG	GGCTGGAGCC	GAGGCCGGAG	CAGCTGTCTG	780
GGAGTCAAGG	CTGCAGTAGC	GTTTCTTCAT	GGGGTGCTCC	AGGGGGTGCC	ACAGACCGAC	840
AGGCAGCCCA	AGGGCCTGGA	CACCCCTCCC	CAGGCAGGTG	CTGCCCCAGG	AGGACTGTCC	900
TCGGGAATGA	ACCTCCCGCG	GGCTTTGGAC	TGAGGTCCCT	GTGGCCTCGG	TCTCCTCCCC	960
ATGAAGTGGG	AGCGAGGCTC	CCCAATGGTG	CTTTTGCTT	TAGTGTACGA	TGTTTGCTGT	1020
GCTTCCCGCC	GTGGAGGGCA	GAGCCACCCC	ACATCAGGAT	CGGACGTGCT	ACCCCTCCCC	1080
GTCCCGGCCC	TGGCCAGCC	AGCCAGCCG	TCGAGGCTCG	ATGCCTGTGC	CAAGGCCAGG	1140
GGCAGCCAGA	GGGCAGCTGG	ATGGCCACGT	GCAGGGGTCA	AGGCTGGGCC	CTGCAGTGGG	1200
GCGGGCCGCC	AGCCCCAGCA	GTTTACAGAC	GCATGGCTCT	TCCTCCAGA	GCAGCCGGCA	1260
GCTACCTGGA	CCGGAATGT	CCTCATCCCC	TCCCTGGGGC	CAGGCTCTGC	CCTGGCCTTC	1320
CTCTGTGAAC	CCCTCCTTTC	TTTGTGCTGG	TGTCTGGGAC	CAAAAAGGGG	GAATATGGGA	1380
GGGCAGAGTG	GGGAGGGGAG	TCCATGGGCC	TGGGGCCCCA	AGCCGGGGCG	TCTGAGCTCC	1440
CCAGGCATGA	CCAAACCTCA	GTGGAGGGGC	CTCTGCTTCA	GGCCCCGCCT	GGCTGACATT	1500
CTGAGCCCCC	CTCGGAGGCC	CCGCCACAGC	CAACCTGCCC	AGTCTTTTCT	CTGGGCTTGA	1560
CCCGCCAGGG	GAGTTCTCCA	GGCCTAGGGC	CAGGAGAGAG	GCCCTGGCAC	CCTGGCGTGG	1620
GTGCCCGGCA	AACGCCCTGC	GACCGCTACA	GAAGCACAAA	TGCTGTCCAT	GGCCGTGAGG	1680
CTGCCTGCCA	GGTGAATGGA	CATAGCGTGA	GAGGCGGTGA	GGCCAGGGCT	TCCAGCCTCG	1740
TGCTGTCTCG	GGACTCCTGA	CCGTGGTGTG	CGTGTGTGCC	CGTCTGTGAC	TTTCTACTCA	1800
CCAAGTTTGA	AGAAAGGAAA	CGGGGAAAAT	CAAAGGGGT	TCAAACCCCA	CCTCAGTAGG	1860
TGGAGGGGAG	CGCCTGCCAT	TGGTTGTATT	TTTGTCTTGA	GTTTTTCGGT	CCGTGTTTCT	1920
AACTACTCCA	TCCCATGACC	TCGCCACACC	TACTGGGGCA	TCTGGCTGGT	GCCTGCTGCC	1980
ATGGCCAGCC	CCCACTTCTC	ACCCTGCACA	GGGGGTCTTG	CAGCCCCCAG	GCCCACAGCC	2040
TCGTTGGGAG	GACAGGGTGG	CCCTGGGGAC	AAGAGGGAGG	AGCCCAGGGG	CTTACCTCAC	2100
TGAGAGTGCT	CCCCAGCAGG	CATCCACTAC	CCCAGGGCCC	CCCACATGTC	ATGGCAAGGT	2160
TGGTAGTGAA	TGGGCCTGGT	TGGGAGCAGC	CCCTGGCCCC	TTGCCCCACC	ACCCATCTCA	2220
CTATGCAATT	CGAGTTCCAA	GCAACATTTG	CTCCTGCCCT	GGGGCCAGCT	CTGCCCCAGC	2280
CCTGAGAGGG	GTGGTGAGGC	AGCCCCCTGG	ACCCAGAAC	CCCAGACAAG	GGGGCAGGCG	2340
GGGGACCAGG	GCCTCTCCTG	TGGGATCTTT	GTTTTGTGTT	TAACCATAAT	GGTTGTGTAC	2400
TGAACCACTT	CATATTTGTT	ATATATAATA	TATATATATA	TAATCTCCTT	AAGACTCAGC	2460
CTCCTGGTTT	ACCCCCCGG	CCTGGGCATC	TGACCTCCCC	CACCCCAGTG	TGATTTAACA	2520
TCCAGGAAT	GAGGCCTGAA	CCATTTTGCA	TTTCCCCCTC	CTCCAGCCTC	TGTAGGGCCA	2580
TGGCTGTATG	TACTGTCGCT	GTGTTTTTTT	GTTTTTTTAG	AACTGGGTTT	GGGGGCTGAT	2640
TTTTATTTCT	TTGGGGGCTT	TTTTTCTTGG	CAAATACTAA	AAATCTCGTC	AATGTAATTT	2700
CTGTGGTTTC	TATTCAGCTT	GGGTTTCATG	TTTTAAATA	AATTTTAAAA	AGCAAAAAAA	2760

(2) INFORMATION ON SEQ ID NO. 601:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1021 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 601:

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GGCGGGGGCCG CGAGAGCAGT AGGTGTTAGC AGCTTGGTCG CGACAGGGGC GCTAGGTAGA 60
GCGCCGGGGAC CTGTGACAGG GCTGGTAGCA GCGCAGAGGA AAGGCGGCTT TTAGCCAGGT 120
ATTTCAAGTGT CTGTAGACAA GATGGAATCA TCTCCATTTA ATAGACGGCA ATGGACCTCA 180
CTATCATTGA GGGTAACAGC CAAAGAACTT TCTCTTGTC AACAAGACAA GTCATCGGCT 240
ATTGTGGAAA TATTCTCCAA GTACCAGAAA GCAGCTGAAG AAACAAACAT GGAGAAGAAG 300
AGAAGTAACA CCGAAAATCT CTCCCAGCAC TTTAGAAAGG GGACCCTGAC TGTGTTAAAG 360
AAGAAGTGGG AGAACCCAGG GCTGGGAGCA GAGTCTCACA CAGACTCTCT ACGGAACAGC 420
AGCACTGAGA TTAGGCACAG AGCAGACCAT CCTCCTGCTG AAGTGACAAG CCACGCTGCT 480
TCTGGAGCCA AAGCTGACCA AGAAGAACAA ATCCACCCCA GATCTAGACT CAGGTCACCT 540
CCTGAAGCCC TCGTTCAGGG TCGATATCCC CACATCAAGG ACGGTGAGGA TCTTAAAGAC 600
CACTCAACAG AAAGTAAAAA AATGGAAAAA TGTCTAGGAG AATCCAGGCA TGAAGTAGAA 660
AAATCAGAAA TCAGTGAAAA CACAGATGCT TCGGGCAAAA TAGAGAAATA TAATGTTCCG 720
CTGAACAGGC TTAAGATGAT GTTTGAGAAA GGTGAACCAA CTCAACTAA GATTCTCCGG 780
GCCCCAAGCC GAAGTGCAAG TGGAAGGAAG ATCTCTGAAA ACAGCTATTC TCTAGATGAC 840
CTGGAATAG GCCCAGGTCA GTTGTCTCT TCTACATTTG ACTCGGAGAA AAATGAGAGT 900
AGACGAAATC TGGAACCTCC ACGCCTCTCA GAAACCTCTA TAAAGGATCG AATGGCCAAG 960
TACCAGGCAG CTGTGTCCAA ACAAAGCAGC TCACCGACTA TACCAATGAG CTGAAGCCAG 1020
G
1021

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(2) INFORMATION ON SEQ ID NO. 602:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 2889 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual
ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 602:

GATCAGGCCT	GTGGTCCAGC	TCACGTGCCAT	TGAGATTCTA	GCTTGGGGCT	TAAGAAATAT	60
GAAAACTTC	CAGATGGGCT	CTATCACATC	CCCCAGTCTT	GTTGTGGAGT	GTGGAGGAGA	120
AAGGGTGGA	TCGGTGGTGA	TCAAAAACCT	TAAGAAGACA	CCCAACTTTC	CAAGTTCTGT	180
TCTCTTCATG	AAAGTGTTC	TGCCCAAGGA	GGAATTGTAC	ATGCCCCCAC	TGGTGATCAA	240
GGTCATCGAG	CACAGGCAGT	TTGGGCGGAA	GCCTGTCTGC	GGCCAGTGCA	CCATCGAGCG	300
CCTGGACCGC	TTTCGCTGTG	ACCCTTATGC	AGGGAAAGAG	GACATCGTCC	CACAGCTCAA	360
AGCCTCCCTG	CTGTCTGCCC	CACCATGCCG	GGACATCGTT	ATCGAAATGG	AAGACACCAA	420
ACCATTACTG	GCTTCTAAGC	TGACAGAAAA	GGAGGAAGAA	ATCGTGGACT	GGTGGAGTAA	480
ATTTGATGCT	TCCTCAGGGG	AACATGAAAA	ATGCGGACAG	TATATTGAGA	AAGGCTATTC	540
CAAGCTCAAG	ATATATAATT	GTGAAC TAGA	AAATGTAGCA	GAATTTGAGG	GCCTGACAGA	600
CTTCTCAGAT	ACGTTCAAGT	TGTACCGAGG	CAAGTCGGAT	GAAAATGAAG	ATCCTTCTGT	660
GGTTGGAGAG	TTTAAGGGCT	CCTTTCGGAT	CTACCCTCTG	CCGGATGACC	CCAGCGTGCC	720
AGCCCCCTCC	AGACAGTTTC	GGGAATTACC	TGACAGCGTC	CCACAGGAAT	GCACGGTTAG	780
GATTTACATT	GTTTCGAGGCT	TAGAGCTCCA	GCCCCAGGAC	AACAATGGCC	TGTGTGACCC	840
TTACATAAAA	ATAACACTGG	GCAAAAAAGT	CATTGAAGAC	CGAGATCACT	ACATTCCCAA	900
CACTCTCAAC	CCAGTCTTTG	GCAGGATGTA	CGAACTGAGC	TGCTACTTAC	CTCAAGAAAA	960
AGACCTGAAA	ATTTCTGTCT	ATGATTATGA	CACCTTTACC	CGGGATGAAA	AAGTAGGAGA	1020
AACAATTATT	GATCTGGAAA	ACCGATTCCCT	TTCCCGCTTT	GGGTCCCACT	GCGGCATACC	1080
AGAGGAGTAC	TGTGTTTCTG	GAGTCAATAC	CTGGCGAGAT	CAACTGAGAC	CAACACAGCT	1140
GCTTCAAAAAT	GTGCGCAGAT	TCAAAGGCTT	CCCACAACCC	ATCCTTTCCG	AAGATGGGAG	1200
TAGAATCAGA	TATGGAGGAC	GAGACTACAG	CCTGGATGAA	TTTGAAGCCA	ACAAAATCCT	1260
GCACCAGCAC	CTCGGGGCCC	CTGAAGAGCG	GTTTGCTCTT	CACATCCTCA	GGACTCAGGG	1320
GCTGGTCCCT	GAGCACGTGG	AAACAAGGAC	TTTGACAGC	ACCTTCCAGC	CCAACATTTT	1380
CCAGGGAAAA	CTTCAGATGT	GGGTGGATGT	TTTCCCAAG	AGTTTGGGGC	CACCAGGCCC	1440
TCCTTTCAAC	ATCACACCCC	GGAAAGCCAA	GAAATACTAC	CTGCGTGTGA	TCATCTGGAA	1500
CACCAAGGAC	GTTATCTTGG	ACGAGAAAAG	CATCACAGGA	GAGGAAATGA	GTGACATCTA	1560
CGTCAAAGGC	TGGATTCCTG	GCAATGAAGA	AAACAAACAG	AAAACAGATG	TCCATTACAG	1620
ATCTTTGGAT	GGTGAAGGGA	ATTTTAACTG	GCGATTTGTT	TTCCCGTTTG	ACTACCTTCC	1680
AGCCGAACAA	CTCTGTATCG	TTGCGAAAAA	AGAGCATTTT	TGGAGTATTG	ACCAAACGGA	1740
ATTTGGAATC	CCACCCAGGC	TGATCATTCA	GATATGGGAC	AATGACAAGT	TTTCTCTGGA	1800
TGACTACTTG	GGTTTCCTAG	AACTTGACTT	GCGTCACACG	ATCATTCCTG	CAAAATCACC	1860
AGAGAAATGC	AGGTTGGACA	TGATTCCGGA	CCTCAAAGCC	ATGAACCCCC	TTAAAGCCAA	1920
GACAGCCTCC	CTCTTTGAGC	AGAAGTCCAT	GAAAGGATGG	TGGCCATGCT	ACGCAGAGAA	1980
AGATGGCGCC	CGCGTAATGG	CTGGGAAAGT	GGAGATGACA	TTGGAAATCC	TCAACGAGAA	2040
GGAGGCCGAC	GAGAGGCCAG	CCGGGAAGGG	GCGGGACGAA	CCCAACATGA	ACCCCAAGCT	2100
GGACTTACCA	AATCGACCAG	AAACCTCCTT	CCTCTGGTTC	ACCAACCCAT	GCAAGACCAT	2160
GAAGTTTCATC	GTGTGGCGCC	GCTTTAAGTG	GGTCATCATC	GGCTTGCTGT	TCCTGCTTAT	2220
CCTGCTGCTC	TTCGTGGCCG	TGCTCCTCTA	CTCTTTGCCG	AACTATTGTG	CAATGAAGAT	2280
TGTAAAGCCA	AATGTGTAAC	AAAGGCAAAG	GCTTCATTTT	AAGAGTCATC	CAGCAATGAG	2340
AGAATCCTGC	CTCTGTAGAC	CAACATCCAG	TGTGATTTTG	TGTCTGAGAC	CACACCCAG	2400
TAGCAGGTTA	CGCCATGTCA	CCGAGCCCCA	TTGATTCCCCA	GAGGGTCTTA	GTCCTGGAAA	2460
GTCAGGCCAA	CAAGCAACGT	TTGCATCATG	TTATCTCTTA	AGTATTAAAA	GTTTTATTTT	2520
CTAAAGTTTA	AATCATGTTT	TTCAAAATAT	TTTTCAAGGT	GGCTGGTTCC	ATTTAAAAAT	2580
CATCTTTTTA	TATGTGTCTT	CGGTTCTAGA	CTTCAGCTTT	TGGAAATTGC	TAAATAGAAT	2640
TCAAAAATCT	CTGCATCCTG	AGGTGATATA	CTTCATATTT	GTAATCAACT	GAAAGAGCTG	2700
TGCATTATAA	AATCAGTTAG	AATAGTTAGA	ACAATTCTTA	TTTATGCCCC	CAACCATTCG	2760
TATATTTTGT	ATGGATGTCA	TAAAAGTCTA	TTTAACCTCT	GTAATGAAAC	TAAATAAAAA	2820
TGTTTACCTT	TTAAAACATA	GGGGGGGTGG	TCGGGGGGTC	GGGAGGGGGG	GGGGTGGTGT	2880
GGGGTGTGG						2889

(2) INFORMATION ON SEQ ID NO. 603:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 3638 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual
ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 603:

AGAGTTTCAG TTTTGGCAGC AGCGTCCAGT GCCCTGCCAG TAGCTCCTAG AGAGGCAGGG 60
 GTTACCAACT GGCCAGCAGG CTGTGTCCCT GAAGTCAGAT CAACGGGAGA GAAGGAAGTG 120
 GCTAAACAT TGCACAGGAG AAGTCGGCCT GAGTGGTGCG GCGCTCGGA CCCACCAGCA 180
 ATGCTGCTCT TCGTGCTCAC CTGCCTGCTG GCGGTCTTCC CAGCCATCTC CACGAAGAGT 240
 CCCATTTTTG GTCCCGAGGA GGTGAATAGT GTGGAAGGTA ACTCAGTGTC CATCACGTGC 300
 TACTACCCAC CCACCTCTGT CAACCGGCAC ACCCGGAAGT ACTGGTGCCG GCAGGGAGCT 360
 AGAGGTGGCT GCATAACCCT CATCTCCTCG GAGGGCTACG TCTCCAGCAA ATATGCAGGC 420
 AGGGCTAACC TCACCAACTT CCCGGAGAAC GGCACATTG TGGTGAACAT TGCCAGCTG 480
 AGCCAGGATG ACTCCGGGCG CTACAAGTGT GGCCTGGGCA TCAATAGCCG AGGCCTGTCC 540
 TTTGATGTCA GCCTGGAGGT CAGCCAGGGT CCTGGGCTCC TAAATGACAC TAAAGTCTAC 600
 ACAGTGGACC TGGGCAGAAC GGTGACCATC AACTGCCCTT TCAAGACTGA GAATGCTCAA 660
 AAGAGGAAGT CCTTGTAACA GCAGATAGGC CTGTACCCTG TGCTGGTCAT CGACTCCAGT 720
 GGTTATGTGA ATCCCACTA TACAGGAAGA ATACGCCCTT ATATTAGGG TACTGGCCAA 780
 CGACTGTTCA GCGTTGTCTAT CAACCAACTC AGGCTCAGCG ATGCTGGGCA GTATCTCTGC 840
 CAGGCTGGGG ATGATTCCAA TAGTAATAAG AAGAATGCTG ACCTCCAAGT GCTAAAGCCC 900
 GAGCCCGAGC TGGTTTATGA AGACCTGAGG GGCTCAGTGA CCTTCCACTG TGCCCTGGGC 960
 CCTGAGGTGG CAAACGTGGC CAAATTTCTG TGCCGACAGA GCAGTGGGGA AAAGTGTGAC 1020
 GTGGTCGTCA ACACCCTGGG GAAGAGGGCC CCAGCCTTTG AGGGCAGGAT CCTGCTCAAC 1080
 CCCCAGGACA AGGATGGCTC ATTCACTGTG GTGATCACAG GCCTGAGGAA GGAGGATGCA 1140
 GGGCGCTACC TGTGTGGAGC CCATTCCGAT GGTCAGCTGC AGGAAGGCTC GCCTATCCAG 1200
 GCCTGGCAAC TCTTCGTCAA TGAGGAGTCC ACGATTCCCC GCAGCCCCAC TGTGGTGAAG 1260
 GGGGTGGCAG GAGGCTCTGT GCGCGTGCTC TGCCCCTACA ACCGTAAGGA AAGCAAAAGC 1320
 ATCAAGTACT GGTGTCTCTG GGAAGGGGCC CAGAATGGCC GCTGCCCCCT GCTGGTGGAC 1380
 AGCGAGGGGT GGGTTAAGGC CCAGTACGAG GGCCGCTCT CCCTGTGGA GGAGCCAGGC 1440
 AACGGCACCT TCACTGTCTAT CCTCAACCAG CTCACCAGCC GGGACGCCGG CTTCTACTGG 1500
 TGTCTGACCA ACGGCGATAC TCTCTGGAGG ACCACCGTGG AGATCAAGAT TATCGAAGGA 1560
 GAACCAAACC TCAAGGTACC AGGGAATGTC ACGGCTGTGC TGGGAGAGAC TCTCAAGGTC 1620
 CCCTGTCACT TTCCATGCAA ATTCTCCTCG TACGAGAAAT ACTGGTGCAA GTGGAATAAC 1680
 ACGGGCTGCC AGGCCCTGCC CAGCCAAGAC GAAGGCCCCA GCAAGGCCCT CGTGAAGTGT 1740
 GACGAGAACA GCCGGCTTGT CTCCTGACC CTGAACCTGG TGACCAGGGC TGATGAGGGC 1800
 TGGTACTGGT GTGGAGTGA GAGGGCCAC TTCTATGGAG AGACTGCAGC CGTCTATGTG 1860
 GCAGTTGAAG AGAGGAAGGC AGCGGGGTCC CGCGATGTCA GCCTAGCGAA GGCAGACGCT 1920
 GCTCCTGATG AGAAGGTGCT AGACTCTGGT TTTGCGGAGA TTGAGAACAA AGCCATTAG 1980
 GATCCCAGGC TTTTTCGAGA GGAAGAGGCG GTGGCAGATA CAAGAGATCA AGCCGATGGG 2040
 AGCAGAGCAT CTGTGGATT CCGCAGCTCT GAGGAACAAG GTGGAAGCTC CAGAGCGCTG 2100
 GTCTCCACCC TGGTGCCCT GGGCCTGGTG CTGGCAGTGG GAGCCGTGGC TGTGGGGGTG 2160
 GCCAGAGCCC GGCACAGGAA GAACGTCGAC CGAGTTTCAA TCAGAAGCTA CAGGACAGAC 2220
 ATTAGCATGT CAGACTTCGA GAACTCCAGG GAATTTGGAG CCAATGACAA CATGGGAGCC 2280
 TCTTCGATCA CTCAGGAGAC ATCCCTCGGA GGAAGAAAG AGTTTGTGTC CACCCTAGCT 2340
 AGCACCACAG AGACCAAAGA ACCCAAGAAG GCAAAAAGGT CATCCAAGGA GGAAGCCGAG 2400
 ATGGCCTACA AAGACTTCCT GCTCCAGTCC AGCACCGTGG CCGCCGAGGC CCAGGACGGC 2460
 CCCCAGGAAG CCTAGACGGT GTCGCCGCCT GCTCCCTGCA CCCATGACAA TCACCTTCAG 2520
 AATCATGTCT ATCCTGGGGC CCTCAGCTCC TGGGGACCCC ACTCCCTGCT CTAACACCTG 2580

CCTAGGTTTT TCCTACTGTC CTCAGAGGCG TGCTGGTCCC CTCCTCAGTG ACATCAAAGC 2640
 CTGGCCTAAT TGTTCCCTATT GGGGATGAGG GTGGCATGAG GAGGTCCCAC TTGCAACTTC 2700
 TTTCTGTTGA GAGAACCTCA GGTACGGAGA AGAATAGAGG TCCTCATGGG TCCCTTGAAG 2760
 GAAGAGGGAC CAGGGTGGGA GAGCTGATTG CAGAAAGGAG AGACGTGCAG CGCCCCTCTG 2820
 CACCCTTATC ATGGGATGTC AACAGAATTT TTTCCCTCCA CTCCATCCCT CCCTCCCGTC 2880
 CTTCCCTCT TCTTCTTTCC TTACCATCAA AAGATGTATT TGAATTCTA CTAGAATTCA 2940
 GGTGCTTTGC TAGATGCTGT GACAGGTATG CCACCAACAC TGCTCACAGC CTTTCTGAGG 3000
 ACACCAAGTGA AAGAAGCCAC AGCTCTTCTT GCGGTATTTA TACTACTGA GTCTTAACCT 3060
 TTCACCAGGG GTGCTCACCT CTGCCCCTAT TGGGAGAGGT CATAAAATGT CTCGAGTCCT 3120
 AAGGCCTTAG GGGTCATGTA TGATGAGCAT ACACACAGGC ATGAGCCACT GAGCCTGGCC 3180
 CAGAAGCGTT TTTCTCAAAG GCCCTCAGTG AGATAAATTA GATTTGGCAT CTCCTGTCTC 3240
 GGGCCAGGGA TCTCTCTACA AGAGCCCCTG CCCCTCTGTT GGAGGCACAG TTTTAGAATA 3300
 AGGAGGAGGA GGGAGAAGGA AAAATGTAA GAGGGAGAT CTTTCCCAGG CCGCACCATT 3360
 TCTGTCACTC ACATGGACCC AAGATAAAAG AATGGCCAAA CCCTCACAA CCGTATGTT 3420
 TGAAGAGTTC CAAGTTGAAG GGAAACAAAG AAGTGTGTTG TGGTGCCAGA GAGGGGCTGC 3480
 TCTCCAGAAA GCTAAAATTT AATTTCTTTT TTCCTCTGAG TTCTGTACTT CAACAGCCT 3540
 ACAAGCTGGC ACTTGCTAAC AAATCAGAAA TATGACAATT AATGATTAAA GACTGTGATT 3600
 GCCACCAAAA AAAAAAAAAA AGACGAAAAG AAAAAGGG 3638

(2) INFORMATION ON SEQ ID NO. 604:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 2775 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 604:

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ATAGGTTTGG ACCTTTCTTG GTAGAATTAC TGCCCTAATT TTGTTCCACT GATACTAGAA 60
ACGGTCTGAT GTTAGAGCTG GAAGGGATCT GTAGTATCAC GCAGTCCGAT TCTCTAATTT 120
TCCACATGAG AAAATGAAGG TCCAGAGGAA GCAGAGACTT AACTCACAAA TCAGAAAAGC 180
GGTTCTTGCA GAACTGAGGC CATAGTGAGG ACTTTCTGCT TTCCACCATA CCACCTTGCC 240
AGTCCACACA AGAGGGAGGA TGTATTTTGG GGGGCATACA CTGAGGATGG AGAAAGATGG 300
CATCAGAACT GCTGGGTGAA GTGGTGGCTT AACTGGACTT TGACAGCTGC CTTTTGAAAA 360
CCCCAAAAC TAAACACACTG CATGTAATCA AAAGATGCTT ATACTAATAA TGACCTGTGC 420
TGTTCCCACT CAGTTGCTCT CTGTTTTTCGA GAAGACATGA GAAGCTGCAA CATGACCTGG 480
AGTGGAACTG GAGAGTCACA TTTTGTGTTT AGCCACCTGC TGGGCAGCAG AGCGACTGCA 540
CCTTCCCAGA AGGCTGAAGT GTCGTGTGTC TGCACTCCAG TGGCATCTCT GCAGTGGTCA 600
GAGTGACCTG GTATAAGGGA GAGGGCATCA CCTTGCCCCC TGTGCTGACT CCTGCCCTTC 660
CCCTACAGGA GAGTCCATCC CGATCCGGCT CTTCTGGGCC GGGTATGAGC TCACGCCCAC 720
CATGCGGGAC ATCAACAAGA AGTTCTCTGT GCGCTATTAC CTCAACCTGG TGCTGATAGA 780
CGAGGAGGAG CGGCGCTACT TCAAGCAGCA GGAAGTGGTG TTGTGGCGGA AGGGTGACAT 840
CGTACGGAAG AGCATGTCCC ACCAGGCGGC CATCGCCTCA CAGCGCTTTG AGGGCACCAC 900

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CTCCCTGGGT GAGGTGCGGA CCCCCAGCCA GCTGTCTGAC AACAACTGCA GGCAGTAGGC 960
 CCCCAGGGCC GAGAAGATGC TGGGCACCCA CCCAGCACCC CCATCTACCA ACACCAGCGG1020
 CTGGGGGCGG GGGCGGACCT TGTGAGGCTC AGTTGACCCG TTACTTGCAA CCTGAAAACA1080
 AATCATGTTT TTGACTTAAA TTCTTTTCTC TGGAGAACCC AAGGGGCTTG GGGTGGGAAG1140
 CAGTCTCTCC TTGGGATTCT GCGGCCGATG TGGGATAGAA GAGGTAGCAT CCTGGAAGCC1200
 AGCCTCTCTG GGGAACATGA GCCCCCTTCC TCGGGGGGCT GCCTTGCGTC TTAGAGGAGG1260
 GAGAGCAGAG AGCACGCATC CTTGGCTCCT GGCTCTCTGA GCTTCCTGAT ACAGGATCTG1320
 AGCATGTCCC TGGGATTCTG AGCTGCCAAC AGGGCCCTGG GTAGTCACAT CTTGTACTCC1380
 CCTTTGCTGT CCCGGAGGTA GTGGCAGGAG TTGGGCCAGC CCCCATAAG TGGCAGGGGA1440
 AGACTCACGA TTGGGAAGCT ACCTCTTTGG GAATCTTGGA TGTGGTGATC TCAAGTTCCC1500
 ACAGGCCACC TCCTTCTGGC CACTCACTGC TGGGACCCAG GCACCTCCCT TCTCCATCCT1560
 CTCTGGATTG TCAGTAATGT CCTGGAACAG AAGCCTGTAG GATGGCCTTG GGCACGGAGA1620
 AGCCCTGGGG TCAGTGTCGT GCACGGATGG CGGCAGTGTT GAACCCAGGA GGCTGAACCC1680
 GGCCCAACC GGAAGATGAG TGCATGGCAA CCGCTGCCT TCACGTCGCT CCACTTGGTA1740
 ACCCCAAGGT CTGGGCTGTT CTAGGTATTG CTTACGTGC CCCAGCAAG CCTTAACAAG1800
 AGGGCCTGGT TCCCTGAAGA ACCAATCCCA GGAAGGGGCC TTGATCCCTC CGCCTTGCTG1860
 AGAGTGAACC CTCGTCTCTC CTCACCCTCC ATTTCAATTC TGGGAATTGG GGCTTAGTTT1920
 CGAACCTTTG GCAAGGCTGT TCTTACTAAT GCCCAAGCCC CTTTACCCCT CTCCCTATAG1980
 GTTACACAGG GGAGACCAGG GCCTCGGCAG AAGACTGCTG CCACACTTCC GAATCATTCT2040
 GCTTGCCAAA TAGGTCATCT TCACCAAGTT ACTGACCCAA GTTTAGGACC ATTGGTATCG2100
 TGTGTTTAAA AAACACATAT AAAAAAATC TTGTGAATAT TCTTGTTATG CTAGAGAGGA2160
 AGGTACTTCT CCCTCTACGG CTCTGCGCTG GGGCCTATGG TAGTAAAGTT GTTTACTGTC2220
 CTTTTTCTGC TTCCCCTGGA AATGACAGGC ATTACTCTCC CATTGGCCTC CCTTCCCTTT2280
 ATAGAAAGC CAAGCAGGCC CCACTGGCCA AGAGGTACGG TATTGGCAG TCTGAGTTCT2340
 CAGTAATTTG GAAAGTTAAG GAGTTGGTTC CTGTGTCACC TTTCAAGTTAG TGTGGGAAAG2400
 GAAGACTTCT GTTTTCCTGA GATCAGTGCA GTCTCAGGCC TTTGGCAGGG CTCATGGATC2460
 AGAGCTGAGA CTGGAGGGAG AGGCATTTTC GGTAGCCTAG GAGGGCGACT GGCGGCAGCA2520
 GAACCGAGGA AGGCAAGGTT GTTTCCCCCA CGCTGTGTCC TGTGTTTCAGG TGCGACACAC2580
 AATCCTCATG GGAACAGGAT CACCCATGCG CTGCCCTTGA TGATCAAGGT TGGGGCTTAA2640
 GTGGATAAGG GAGGCAAGTT CTGGGTTTCT TGCTTTTCA GAGCATGAGG TCAGGCTCTG2700
 TATCCCTCCT TTTCTAGCT GATATTCTAA CTAGAAGCAT TTGTCAAGTT CCCTGTGTGG2760
 CCCTTCCCCC CAGAG 2775

(2) INFORMATION ON SEQ ID NO. 605:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 944 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

(A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 605:

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GGGAGATGCC ACCGGGAAAT CCCCCAATGT CCACTAGGGG GCAGGAGGCC ACCGTTCTTC120
GTACTCCGGA GAACCTGGCT GGAGAGCTCT TTCTTGTTCA CCCTTCCCAC CAGACTAAAA180
GGTCATCGCA GATAACGTGA AGGACTGGAG CAAGGTCGTC CTGGCCTATG AGCCTGTGTG240
GGCCATTGGT ACTGGCAAGA CTGCAACACC CCAACAGGCC CAGGAAGTAC ACGAGAAGCT300
CCGAGGATGG CTGAAGTCCA ACGTCTCTGA TGCGGTGGCT CAGAGCACCC GTATCATTTA360
TGGAGGCTCT GTGACTGGGG CAACCTGCAA GGAGCTGGCC AGCCAGCCTG ATGTGGATGG420
CTTCCTTG TG GTGGTGCTT CCCTCAAGCC CGAATTCGTG GACATCATCA ATGCCAAACA480
ATGAGCCCCA TCCATCTTCC CTACCCTTCC TGCCAAGCCA GGGACTAAGC AGCCCAGAAG540
CCCGAGTAAC GCCCTTTCCC TGCATATGCT TCTGATGGTG TCATCTGCTC CTTCTGTGG600
CCTCATCCAA ACTGTATCTT CCTTTACTGT TTATATCTTC ACCCTGTAAT GGTGGGACC660
AGGCCAATCC CTTCTCCACT TACTATAATG GTTGGAAC TA AACGTCACCA AGGTGGCTTC720
TCCTTGGCTG AGAGATGGAA GGC GTGGTGG GATTGTCTCC TGGGTTCCCT AGGCCCTAGT780
GAGGGCAGAA GAGAAACCAT CCTCTCCCTT CTTACACCGT GAGGCCAAGA TCCCCTCAGA840
AGGCAGGAGT GCTGCCCTCT CCCATGGTGC CCGTGCCTCT GTGCTGTGTA TGTGAACCAC900
CCATGTGAGG GAATAAACCT GGC ACTAGGA AAAAAAAAAA AAAA 944

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(2) INFORMATION ON SEQ ID NO. 606:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1939 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 606:

CCAGTCAAGA	ATCTCCCACT	AAGCTTCAAA	GTAGTGGATT	ACAGCATGGC	AACCATGCCA	60
GTAATTTGAA	ATTTAGTAGA	GAGGCTTTTCG	CTTAGTAGAG	ATGGGTTTTT	GCAGGCTGCT	120
CCCGAACTCC	TGACCTCACC	CCACCCGCGG	CAACCCCCC	ATCGGGCCCC	CAAAGTGCTG	180
GGGTTACAGG	CTTAAGCCAC	CAAGCCCGGC	CGACCTTCTT	CTATTTTTC	ATTCTCCTTT	240
CCAAAGCCAT	GGCCATGCGC	TCCTGTGTAC	AGGTGCATAA	ACACATCAGT	GTGCCATCCC	300
TCACATGCAT	GTCGTTCCCC	ACCCCTCCTT	CCCAGGGCTT	CTCTTGGCTC	CAGCGTTCCT	360
CTGGGACCCT	CTGCAGATAC	AGCCTGTGCT	GGACCCCCAG	CCAGGGTGAG	GGCTCATTCT	420
GCTCTGTCTT	CCCCACTGCC	TCAGTTTCCC	CCAAAAGCTG	ETTTACGTC	CTTCTAGTAG	480
GGGGCCTCCC	ATGGGGGCAA	GGATCCCCTT	TAGGATTCAA	TCTTTCCTCT	TTGGGCAGTT	540
TTGGCTTTGA	GTCCCCCAGG	GATCAGGGTG	AGAATGAAGA	AGAGCTCAGT	GAGCGGAATG	600
ACAGCAGCTG	GGTGGGTGGT	GTGGGGAGAG	GCTGAGGGGA	AGGCAGCTCT	AAGACTGGGA	660
GTGGAGTTCC	TGGAGGTGTG	GGGAGGGGGG	CGTGTTTCA	ATTTAGAAAA	ATCTCAGCCA	720
GCTCGAGCCG	AGAGAGAATG	CGAAAGAGGA	AGTTCGGAAG	GAGCGAGGAA	TGGGGTGGT	780
GGCAGCGGGG	GCCGCTCAGT	CGCTGTCGCT	CTTGTCACAC	AGCACGGCGT	CCGACTCCTC	840
GGTGATCTCC	AGCAGCGCGT	GCACGTCGGG	GCTGCTCCCG	CGCCGCAGGT	CGCCGGCCTC	900
CCCCCGCTCC	GCGCCGCCCT	CGTCGTCGTC	GGCGCCACAC	TCCACCATCT	CGGTGGCCTT	960
GAGCACTTCC	ACCTGGCCCT	CGCGGATCTT	CTTGACGTGG	AAGGTGAAGG	GTGGCACCTT	1020
GTAGACCGCG	GTCTTGAGC	GCGCGTACAC	CACGTGGTCG	GGCGTGAAGG	ATTTGCGCAA	1080
CTTGTCCCGC	GACGTCTTCA	GTTTCTCGCG	CCGCTCGGCG	GGCACCAGGC	GCGTGCCAG	1140
CTTGTTTCATG	CGCTTCTCCA	GGGTGTGCCG	CGTCTTCTCC	AGGTTTTCTT	TGGTCTTGAG	1200
GCGCGTCTTC	TCCAGGTTCT	CGCGGGTACG	CACCTTGGTC	TTCTCCATCT	TCTCCTTGGA	1260
GAAGGCCTTC	TTGAAGTCGT	CCACGCGCCG	CAGGCCCTGC	GCTTGATACG	CTCTGCGCGG	1320
GACTCCTCAA	TAACCTCCTC	AACCTCCACC	GCCTCGTCCG	ACGAAAGCTC	CAGCGCCGCT	1380
GCGTCTCTCT	CGGGCCGCTC	GCCCTCGCCC	AGCTCCTCGC	CCTCCTTCTC	TGGCAGCGCC	1440
TCCGACTCTT	TCAGCGATTT	GCTGATGCTC	AGTTTGCCCG	GCAGCTTCAC	TTATCCTGG	1500
TAGATCATGA	CTTTAAAGTT	GCGGCGCCGC	AGCAGCTCGG	CCTCGTTGAC	CTCCAGCTTC	1560
TTGATCTGCC	CCGCCTGGCG	CTCCAGGCTG	CCGCGCACGG	TCTTCACGTT	GACGCTGACC	1620
TTGCGCACCT	TCTCCAGCAG	CTTGCTCACC	GTATTGCTCG	TGGTGGCGTG	CGCCTTGCCC	1680
AGCTTGCTCA	GCTCGCCCTG	GATGCTCTGC	ACTGCGCCCT	CCATCTCCGC	CTGCCGCTCC	1740
TCCAGCTGTG	CTTGAGTCAG	CTGGATCTGG	TCTACGGCCC	CGATGATTTT	GTCCAGGAGG	1800
CTCAGCACCA	GCACGCCGTT	CACCTGGTCC	GACTTGATCA	GCTCTTCTGA	GCCGGCCCCC	1860
GACGGCTCCT	CCGCTGCCTG	AGCCCCAGCG	GAGGAAGCTC	CGGGGCCTCG	GCGATCGGGG	1920
TACCCGGGCA	AGCGGCCCGC					1939

(2) INFORMATION ON SEQ ID NO. 607:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1570 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 607:

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GGCACGAGGA AGTTAAGATC ATACATGCGG ATGTGCTGGT AACCTGCAAG AAGCAATCAT 60
GCTGCGGTCC GGTGTGACCT CCCAAGGCAT TCACCCTGGG AGTCCCTGGT GCTGCACCCC 120
AACCCAGGCA GAGCTCATCG TGGGTGACCA GAGCGGGGCT ATCCACATCT GGGACTTGAA 180
AACAGACCAC AACGAGCAGC TGATCCCTGA GCCCGAGGTC TCCATCACGT CCGCCCACAT 240
CGATCCCGAC GCCAGCTACA TGGCAGCTGT CAATAGCACC GGAAACTGCT ATGTCTGGAA 300
TCTGACGGGG GGCATTGGTG ACGAGGTGAC CCAGTCTATC CCCAAGACTA AGATCCCTGC 360
CCACACGCGC CGTACGCCCT GCAGTGTCGC TTCAGCCCCG ACTCCACGCT CCTCGCCACC 420
TGCTCGGCCT GATTAAGACG GTGCAAGATC TGAAGGACG TCCAACCTTC TCCCTGATGA 480
CGGAGCTGAA GCATCAAGAG CGGCAACCCC GGGGAAGTCC TCCGCGGCT TGGATGTGGG 540
GGCCTGCGCT CTCATCGGGG GACTCCCAGT ACATCGTCAC TGCTTCCTCG GACAACCTGG 600
CCCGGCTCTG GTGTGTGGAG ACTGGAGAGA TCAAGAGAGA GTACGGCGGC CACCAGAAGG 660
CTGTTGTCTG CCTGGCCTTC AATGACAGTG TGCTGGGCTA GCCTGTGACC CCTCGGGACN 720
TGCCTGGTGC AGGTGGTGGC AGCNTGGAGG GACCCATGCA GCACCCAGGT CAGAGCAGAC 780
CCNTNCCCCT NGCCNGGCCCT GCGCCANGCT GGNACCTGAT GGCCCCCTGT GGCGCCCTGA 840
CCTGCTGGGC CAGGCTGNCC CTGGGACTCT CAGCCCCCAN GTTGCTTATC CANGATGTGA 900
CAGAGCTCGA CCCAAGCCAG GCTGCACACT CCTGGACNTG GGCTAGCCTG CACTGCCNTG 960
GGAAAGNTCN GCCGAGGGCC CANAAGCTGC TGAGGGGTNC TGAGGCTGGT GCCCACCCTC 1020
AAGCTAGTGT GTTCTCTGCC CCTCCCTGCC CGCGTTTCAG GGCCTCGGTC CATAGAGAAC 1080
ACCACCACCA TGGCCAGGTG GAAGGGTTTA TTAGTCCCTG CCAGCAGCTG TCCTCCCTGG 1140
TGCAGGTGGC CTGGCCAGCC CACTGGATTG GGGACGGGCC AGGCTGGGCC AGGTCGGGGG 1200
CTCAGTCTGG GAGGTAATAA AAGCAGACCG ACACGCAGAT GTTGCTCGGG AAAAAAAAAA 1260
AAAAAAAAAA AAAAAAAGC CGCTGTCTCC GGGGCCCCCTC TGCTCGCCGG GCCCAGTAGA 1320
TGGGGGTCTT CATGCACAGG CGCTGCACCA AAGCCCCCGC CTGGGCGGTA GCCACTTACG 1380
AGGCTCCCCC GCACTGCCAG CAGCTCCTGG GTGTGGTGGG TGTCTTGGCT GGGGACCCAA 1440
GCCTCTTGGA CCTTGGAGGT ATCCACCAGC AGCCGCAGGT CTCCCGATCA CTGTCTTCCA 1500
TCAGGCGGAG GAAGCAGACC TGGTGCTCCT CAGGGCGGTA ACAGATGCAG CCGCTCTGCC 1560
CGTCGAACAG
1570

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(2) INFORMATION ON SEQ ID NO. 608:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1768 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 608:

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GCACAATCCC GGCTCACTGC AACCTCCAAC TCCTGGGTTT AAGCGATTCT CCCGTCTCTA 60
CAAAGTATAC AAAAAAATTA GCCAGGCATG GTGGTGCCTG CCTGTAATCC CAGCTACTTG 120
GGAGGCTGGG GCACAGGAAT CCTTTGAACT TGGGAGGCAG AGGTTGCAGT GAGCTGAAAT 180
CACACTACTG CCCCCCAGCC TGGGCAACAG AGCAAGACTC TGTCTCGAAA AAAAAAAAAG 240
AAAACAATGA AGGAAAAGGA GGGTGAGTTA GCTGGAGTAG AATAGAGGTA TAGAATCGTT 300
CCTAAATAAC CGGCTGCATT GGTTCCTTGG AGACTTGCTA AAAACCCAGA TTCCAGGCC 360
CCACTTCTTG GTGCTCCTAA TTCAGTAGCA TCACAGTAGG GTTCCAGAAG CCGTATTTTT 420
AACAAGCTCC CAGGTAATTC TGATGTGCAC CTAGATTTGG AAATCACTGT GTTAAAAAAT 480
ATTGTGAGGT AAGTTGGTCA GTTAGGTTGG GCAGCTTTTA TTTCATTGCT AAGGGATTTG 540
GACTTGATGG TGTAATAAAG CATTAAATGA ACAAATATTT ATGGAGCCTG TACTATGTAC 600
CAGATGCAGA CTGTGCTAGC GGTGGGGAT ACAGTGATGA CTTGGTCTGC CTCTAGGTGG 660
CAGGGAGCCA TTTTGGGTTT TCGAACAGAA AAGTGACATA ATGAATGCTG AGTTCTTAGG 720
AAGATTAATC CAGGAGTAGT CTCCAGGATG TACTGGAAGG AGAGAAGCTG AAACCAGGGA 780
GGCTGCTGTG TTTGCAGTTG GCTGCCAGT GCTACCTCTG CAGAGACAAT CAATGTCCTG 840
AAGGTAGCTG GTATGTCTGT GTGCACTGAC ACGAGCCTTC CTACCAAGCC CCAGGGGCTC 900
CATGCTGGAG AATGCACGTA GGGCTAGGGT GAGCACTAAC TTCACTTCAG GAGAGCAAGG 960
AACAGTGTGG CTCTTCCATT TTTCAATTCT GTAAGCACAT CACCCTTTTC TCCTCCCCTT 1020
GAGCTGTGTT CTCTGACAGC TGTTTGTGTT TAAAGCCAGC AGCCCCTAAA GCACGTCCCA 1080
GCCTTGCTCT CTCTGTGCTT TCCCCACCA CTGCTGCTGC ACGCCTCATT TGCTGGGCCA 1140
CTTTAGTGGT GGAACCATTA GAGGCTGAGT GACTTAAAGG AGATTGAGTC TGTCTCGACC 1200
CCGAGAGAGA GTGGGATGGA TGGATGCATC GTCTCATTTA GAAAGTGTG CCTCTGACTC 1260
TAACACACTC TTCTCTCTTT CTTTACCGCC CTCCCTGTGT GCGTCCCTGG GGGGGCGTGG 1320
GCTAAACCCC TTCCGTCCCC CTTTCTCCTT CTCTCTCACA GTGTAGGCAC CACTTCTCTT 1380
ACAATTTAGG CTTTCTCTCT GCCTTGGGCT GAGTGAGGAA GAGGAGTGCT GTTCTGCTCT 1440
TCCTAGCCCA GCTGGGTCTG ACCAGAGGCT ACTGTGTACC CATTTACCAT GCGTGATTGT 1500
TAACTCAGAG TGGGGTGTAG CCAGGTATTG ACTGAATGTA TGTTCTTGCT GACCTGTGTT 1560
TTTTTCTGTA GGGACCAAAG CAGTATCCTT ACAATAATCT GTACCTGGAA CGAGGCGGTG 1620
ATCCCTCCAA AGAACCAGAG CGGGTGGTTC ACTATGAGAT CTGAGGAGGC TTCGTGGGCT 1680
TTTGGGTCTT CTAAGTAGGA CTCCCTCATT CCTAGAAATT TAACCTTAAT GAAATCCCTA 1740
ATAAACTCA GTGCTGTGTT AAAAAAAA

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1768

(2) INFORMATION ON SEQ ID NO. 609:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1001 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 609:

TAAGGAGACT	GAAAGGTGAT	TCATTTAGTG	AGTAGCGATT	ACAGAATTTT	TAAAACAGTG	60
GGGGCGGGGG	GGGCGGCGGG	GAGGAGGGCT	GGAATTGTCC	TCCAGCGCAT	ACAAGGTTGT	120
TGCTGCCAGA	GAAATCCAGC	AGGAAAAGAGC	AGCATTCTTT	CACCTTTTCC	GCCTCTGAAG	180
CGGAGGAGAA	CTTCATTTCC	CAGCAGCCCT	TAAGATTCCT	CCGCGCACTG	CGTAGCGTCT	240
CCGGCATTCT	GCTTTCCGGG	GCTCTGCCTT	CCGGTGCCTC	GTTTACGGCC	AGTTTGAACC	300
AAAGACGCCC	AANGGTTGAG	GCCGAGNTTC	CAGAGCATGG	GGTCTCGGTT	GTCCCAGCCT	360
TTTGAGTCCT	ATATCACTGC	GCCTCCCGGT	ACCGCCGCCG	CGCCCCGCCA	ACCTGCGNCC	420
CCCAGCTACA	CCCGGAGCGC	CGACCTNCCC	CNAGCAGAAC	ACCGCCTNGT	TGAAGANCCT	480
GCTGGAGCTG	TCGNCGTNGC	TTTCTGGGTT	GGGGCTGATG	GGGGNNCGGG	CGGGTACGTG	540
TACNTGGGTG	GCANCGGAAG	CCCATGAAGA	TNGGGATACC	CCCCGAGTNC	CATGGACCNA	600
TTACNGCAGA	TGGTCATCGN	NGCCTCANGC	NATTGCCACC	TNGGGGTANT	CGTTGTNCAT	660
NGGCAGACCC	CAAAGGGAAN	GGCCTANCCG	CGTTGTTTNG	AAAGNTACCA	CCANGTGAAT	720
NCTGTCTTCT	GTCTNCTNGT	CCCNTTTNC	CCGTGACACA	CAGAGCAGGC	ATGGAATTTA	780
ATGGGNTGTT	CTGGNACNAG	ACACTTGTAC	ATGGACAGAC	ATCACTACTN	NGTGGATACT	840
NNACAAGACT	GAAAAGNAAA	ATCGTATGTT	GTCATTNCTC	TGGCTANTGG	AGTGTGTTGT	900
GCCTTCACAG	ATTTACACAG	AACCAATAAA	TCCCTCAGAG	AAGTAAAAAA	NAAAAAAA	960
AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAAAAAA	A		1001

(2) INFORMATION ON SEQ ID NO. 610:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 2515 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 610:

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GGTGTGGAAA CTACTGCAAA TAGTAGCACT TCACTGAGAT CTACAACTCT TGAAAAAGAA 60
GTTCTGTGCA TCTTCATCCA CCTTTTAAAC ACTGGATTAT TCCGGATAAA AATTCAAGGA 120
GCCACTGGAA AATTTAATAT GGTCATCCCT CTTGTGGATG GGATGATTGT CAGCAGGCGA 180
GCTCTTGGCT TTCTGGTGAG GCAGACTGTA ATTAACATTT GTAGAAGAAA GAGACTGGAA 240
AGTGACTCCT ACAGTCCCCC CATGTCCGCC GGAAACAGAA AATCACCGAC ATTGTCAACA 300
AGTACCGGAA CAAGCAGCTG GAGCCAGAGT TTTATACTTC ACTTTTCCAG GAGGTTGGAC 360
TCAAGAACTG CAGTTCTTAG ACCACTGAAT TTCTAAGACT GTTGAAGTCC AGTTTGGGAA 420
CTATAACACA GCAGAACAGT TTGATAGGTG ATCACTGTAA AAATAAAAAC AAATCACTCC 480
CAAGAGCTTA CTGTTTAATC ACCAGAATAG AAGAAACACA TTATAACCCA TTTGATAGAA 540
GACTTTGGGC TATCTAGTGA AATGGGCTCC CAGACACAAT CATACTCCTG CTGATAATGA 600
TGATATACAT TTTAGCCATA AACTTTCTTT TAAAAGTGAC AATTTTAGTT AAACATAAGC 660
CTTTTGAGGA GAAAGGCTTT TATGCATCTC AGTTAAACAC GTGCATTGGT AGTATCAACA 720
AATTTGCAAT ATAGAAGTTG AAGATAGTTT TTTNCCTCAC TTTTLAGGAG GCTGTATTCA 780
AAATTAATAA CTCAGAATCT TACAGGACAT TTAAAGGACT CATGTTGATA GCATGGAGGA 840
GAAGGAAAGA AGTCACAGCC TTCTACTCAG TTGTAGGTCT TCTTGTCATC CAGCTGTCAC 900
ACTGACAAAA AGAAAAGATG ATANCATGTT TTTTGTCTCA GATAAGAAGC CTGACATTAA 960
AAGATGTCAT ATTTTTTTCT CCACATTTCA AAAAGTTGTC CTTCTCATCA CTGCACAGAT 1020
CTGTCTGAAA GCCTCAGTTT CTGAGTGACC CAGGAACAGA TCAGAAATGG AGCATGGCCT 1080
TGTCCTTTAA TGGGGATGCA AATAAAGTTT GTGGGGTTAA AAGTTATAAG ACAGCAGTGA 1140
TACCCCACTC TCTCCATTAT TGTCCAGCGG GGTGACATAA TGACAGGTTA AATATTTGTG 1200
ATTCATTGAT TAAATATTAT TTAAAGAAAT GTAAAAAATA AAAAAAGGTT GAAAATTATT 1260
TGGTTTCATC CATTGTCTCT TATTTTCAGGA CCAAGCAGCA AACTGCAGTA GTTTGTGAAG 1320
GATTCTAATA TGGGGTTCAG GAATAGCCTC TCAACGCTAC TAATTCAGAT CTCTCCAGAG 1380
GAACTACTGG ATTTCTCAT AATTGACAAA CATGAGTGAC CACCTCTTTG GGTGGCTACT 1440
GTTAGAAATG GCTGTTGTCA TGTTTTCTGG ACTTTGCCAG CCAACAGATC CCTGCCAGGT 1500
TTTGGAATAA CTCTATTAC CTCGCTGCTA CTTTCTGCA GGGATAAAAC TTTTGNAGGT 1560
GGCCAGACCC AGAACATCCA AGGATTCTCT TTACAGTGCT ACAGTATACA CTGCTCATTT 1620
ATCCTATTCT CATGTGCTTT CTTCTTTAGT AAGATTATTT TAAGAAAATA AGTGATATTT 1680
AAAGTCCAAA GAGGAATGAT CACAGTTGTA TAAGGGGTGT TTTCCCACTT GAACTCTGAT 1740
GTCAGTCGAC TGTGGGTCAG AGCTACAACC ATCTGTTTGG TTTGATGTTT TGGTGGTTTA 1800
CTTACGGAGT GGGGATAGTG TGAGACCTAA TTCCCTGTGC AAATGTCTCT TATTCCAGAA 1860
ATGTGCATTT TGTCTCTAT AAGCAAGAAA TATGGGCATA GCAGCTCTTG GTTTAAANGT 1920
TTGCCATAAC CTGTTTCATGT TTGTTTTAAG CTCAGGTAAA GATAACCTCC NTCTTTCTAT 1980
GACTCCAAGT TCCATTTCAG TTATAGTATT ATTCAATAGT TGATTTTCTT TTTAAGCTNG 2040
GGCAATAAAT TGATGTTTCC AGATGGTAAC ATGGGGANGAG GGCATATAGG ATAAAGATNG 2100
AGCAAATTCT ACCCTAAAAA TGNTTCTAGT AGTTCACAGG AAGAAGATGA GGTTTAATAA 2160
CTTTCAAGGT AATTCTAGAT TGACATTTTN GAGGGGAAAA TGGGCTCTTG TTCTAGTTGA 2220
AGTGAGCAGA GAANGGCTAT NAAATTAATA TGTAANCTTA CAGCATTCCA GAGGTTAAAA 2280
ATAACTGATG CAGATGTACT TCTTCAGTGT GATTCTTCAG ATCAAACTTT TACTTTTGGC 2340
ATAGTTAATT TCAGAAAAAT GTGCTGTATG TGTGTTGTGA TGAGGGTTGG TCTTGTGTGA 2400
CCTTCAGTTA GCTCTAAATT CTGGCAACTC CTTGTAATTC CCATGTATTT GATACCATGA 2460

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(2) INFORMATION ON SEQ ID NO. 611:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 818 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 611:

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TTTTTTTTTT ATTTAAAGCC TGGATTGTAA CCAGATTTTC TTTTTCCTCC CTTCTCAGCT 60
GTAGATATGA TATCTCCTTT CAGGGCCCCA GCTTAAGGGC AAAGTGAGTT AATGTGTAGA120
CAAAGGCGAG GGACAAGAGA GAGTTAACAT CTAGACAGTG GAAAAAGCCA TGGTGTGTGG180
TTTCTGGGAA CCACCAACAC TTGCAGGTTT AGCTTTTTTC CAGGGTTGAC TACAAGAAAG240
AAAACCATGT TTTTGCAAGA TTAATATGTG GTTGAGTGTG CCTAAATTAA CCATCCCCAT300
TTTTATCATA TTTCCACCAT CACTTCAGGG TTTTAAGAGT CAGTGCTCAC CTGGGCGGAG360
CTGGTAGTAC ATTTTGCTTC TTAGAAAGCT AAGTCCTGGG TTCCGTCTGA TTTTAGGTTC420
CAGGAACCTC CTGAGAACAC CCGATCGCAG AGGGTAATTT TCTGGAGTTT GTTTTGCAGG480
GATAGCTGGG AGTATGGCCA CCCTGCTCCA CGATGCGGTA ATGAATCCAG CAGAAGTGGT540
GAAGCAGCGC TTGCAGATGT ACAACTCGCA GCACCGGTCA GCAATCAGCT GCATCCGGAC600
GGTGTGGAGG ACCGAGGGGT TGGGGGCCTT CTACCGGAGC TACACCACGC CAGCTGACCA660
TGAACATCCC CTTCCAGTCC ATCCACTTCA TCACCTATGA GTTCCTGCAG GAGCAGGTCA720
ACCCCCACCG GACCTACAAC CCGCAGTCCC ACATCATCTC AGGCGGGCTG GCCGGGGCCC780
TTGCCGCGGC GGCAGGGGC CCCCTGGACG TTTTAAGA

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818

(2) INFORMATION ON SEQ ID NO. 612:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1024 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 612:

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GCGGTCGGTA GTGCGGCGCT GTTTAAAGAT GGCGGCGGAG GAACCTCAGC AGCAGAAGCA 60
GGAGCCGCTG GGCAGCGACT CCGAAGTGTT AACTGTCTGG CCTATGATGA AGCCATCATG 120
GCTCAGCAGG ACCGAATTCA GCAAGAGATT GCTGTGCAGA ACCCTCTGGT GTCAGAGCGG 180
CTGGAGCTCT CGGTCCTATA CAAGGAGTAT GCTGAAGATG ACAACATCTA TCAACAGAAG 240
ATCAAGGACC TCCACAAAAA GTACTCGTAC ATCCGCAAGA CCAGGCCTGA CGGCAACTGT 300
TTCTATCGGG CTTTCGGATT CTCCCACTTG GAGGCACTGC TGGATGACAG CAAGGAGTTG 360
CAGCGGTTCA AGGCTGTGTC TGCCAAGAGC AAGGAAGACC TGGTGTCCCA GGGCTTCACT 420
GAATTCACAA TTGAGGATTT CCACAACACG TTCATGGACC TGATTGAGCA GGTGGAGAAG 480
CAGACCTCTG TCGCCGACCT GCTGGCCTCC TTCAATGACC AGAGCACCTC CGACTACCTT 540
GTGGTCTACC TGCGGCTGCT CACCTCGGGC TACCTGCAGC GCGAGAGCAA GTTCTTCGAG 600
CACTTCATCG AGGGTGGACG GACTGTCAAG GAGTTCTGCC AGCAGGAGGT GGAGCCCATG 660
TGCAAGGAGA GCGACCACAT CCACATCATT GCGCTGGCCC AGGCCCTCAG CGTGTCCATC 720
CAGGTGGAGT ACATGGACCG CGGCGAGGGC GGCACCACCA ATCCGCACAT CTTCCCTGAG 780
GGCTCCGAGC CCAAGGTCTA CCTTCTCTAC CGGCCTGGAC ACTACGATAT CCTCTACAAA 840
TAGGGCTGGC TCCAGCCCGC TGCTGCCCTG CTGCCCCCCT CTGCCAGGCG CTAGACATGT 900
ACAGAGGTTT TTCTGTGGTT GTAAATGGTC CTATTTCACC CCCTTCTTCC TGTACATGA 960
CCCCCCCCCA TGTTTTATTA AAGGGGGTGC TGGTGGTGAA AAAAAAAAAA AAAAAAAAAA 1020
AAAA                                             1024

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(2) INFORMATION ON SEQ ID NO. 613:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1322 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 613:

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GCTGACCACG ACATGTGTCT CCTCCTCTGC ACCTTCCAAG ACCTCCTTAA TAATGAACCC 60
ACATGCCTCT ACCAATGGAC AGCTCTCAGT CCACACTCCC AAAAGGGGAAA GTTTGTCCCA 120
TGAGGAGCAC CCCCATAGCC ATCCTCTCTA TGGACATGGT GTATGCAAGT GGCCAGGCTG 180
TGAAGCAGTG TGCGAAGATT TCCAATCATT TCTAAAACAT CTCAACAGTG AGCATGCGCT 240
GGACGATAGA AGTACAGCCC AATGTAGAGT ACAAATGCAG GTTGTACAGC AGTTAGAGCT 300
ACAGCTTGCA AAAGACAAAG AGCGCCTGCA AGCCATGATG ACCCACCTGC ATGTGAAGTC 360
TACAGAACCC AAAGCCGCCC CTCAGCCCTT GAATCTGGTA TCAAGTGTC CTCTCTCCAA 420
GTCCGCATCG GAGGCTTCTC CACAGAGCTT ACCTCATACT CCAACGACCC CAACCGCCCC 480
CCTGACTCCC GTCACCCAAG GCCCCTCTGT CATCACAACC ACCAGCATGC ACACGGTGGG 540
ACCCATCCGC AGGCGGTACT CAGACAAATA CAACGTGCCC ATTTCTGTCAG CAGATATTGC 600
GCAGAACCAA GAATTTTATA AGAACGCAGA AGTTAGACCA CCATTTACAT ATGCATCTTT 660
AATTAGGCAG GCCATTCTCG AATCTCCAGA AAAGCAGCTA AACTAAATG AGATCTATAA 720
CTGGTTCACA CGAATGTTTG CTTACTTCCG ACGCAACGCG GCCACGTGGA AGAATGCAGT 780
GCGTCATAAT CTTAGTCTTC ACAAGTGTTT TGTGCGAGTA GAAAACGTTA AAGGGGCAGT 840
ATGGACAGTG GATGAAGTAG AATTCCAAAA ACGAAGGCCA CAAAAGATCA GTGGTAACCC 900
TTCCCTTATT AAAAACATGC AGAGCAGCCA CGCCTACTGC ACACCTCTCA ATGCAGCTTT 960
ACAGGCTTCA ATGGCTGAGA ATAGTATACC TCTATACACT ACCGCTTCCA TGGGAAATCC1020
CACTCTGGGC AACTTAGCCA GCGCAATACG GGAAGAGCTG AACGGGGCAA TGGAGCATAC1080
CAACAGCAAC GAGAGTGACA GCAGTCCAGG CAGATCTCCT ATGCAAGCCG TGCATCCTGT1140
ACACGTCAAA GAAGAGCCCC TCGATCCAGA GGAAGCTGAA GGGCCCCTGT CTTAGTGAC1200
AACAGCCAAC CACAGTCCAG ATTTTGACCA TGACAGAGAT TACGAAGATG AACCAGTAAA1260
CGAGGACATG GAGTGACTAT CGGGGCGGGC CAACCCCGAG AATGAAGATT GGAAAAAGGA1320
AA

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(2) INFORMATION ON SEQ ID NO. 614:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 4458 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 614:

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GCCCGGCGTT AACAAAGGGA GCCGATACCG ACCGGCGTGG GCGCGGAGCG GCGGGCCGCC 60
ACCGAGCGTG CTGAGCAACC GCAGCCTCCG CGGCCGAGAG TGCAGCGAGC AAGGGGACAA 120
AAAGTTCCGC AAAGCCCGCA CAACCAGCAC CACAGAGAGA AGGGAAGAAC GGCATCCAGC 180
CCACCAGAAA TGGACCGACA CACCTCAGCA TCTCCAAACC CCGCAGCACA CGTGACCATA 240
AACCAGCAAA GATGAGTTTT GATCATCCTG AGAAAAATGG GCCTTGGCCT GCAGACCCAA 300
TAAACCTTCC CTCCCATGGA TAATAGTGCT AATTCCTGAG GACCTGAAGG GCCTGCCGCC 360
CCTGGGGGAT TAGCCAGAAG CAGGCTTGTT TTCCTGCTCA GAACAAAGTG ACTTCCCTGA 420
ACACATCTTC ATTATGATTC ACACCAACCT GAAGAAAAAG TTCAGCTGCT GCGTCCTGGT 480
CTTTCTTCTG TTTGCAGTCA TCTGTGTGTG GAAGGAAAAG AAGAAAGGGA GTTACTATGA 540
TTCCTTTAAA TTGCAAACCA AGGAATTCCA GGTGTTAAAG AGTCTGGGGA AATTGGCCAT 600
GGGGTCTGAT TCCCAGTCTG TATCCTCAAG CAGCACCCAG GACCCCCACA GGGGCCGCCA 660
GACCCTCGGC AGTCTCAGAG GCCTAGCCAA GGCCAAACCA GAGGCCTCCT TCCAGGTGTG 720
GAACAAGGAC AGCTCTTCCA AAAACCTTAT CCCTAGGCTG CAAAAGATCT GGAAGAATTA 780

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CCTAAGCATG AACAAAGTACA AAGTGTCTTA CAAGGGGCCA GGACCAGGCA TCAAGTTCAG 840
 TGCAGAGGCC CTGCGCTGCC ACCTCCGGGA CCATGTGAAT GTATCCATGG TAGAGGTCAC 900
 AGATTTTCCC TTCAATACCT CTGAATGGGA GGGTTATCTG CCCAAGGAGA GCATTAGGAC 960
 CAAGGCTGGG CCTTGGGGCA GGTGTGCTGT TGTGTCTGTA GCGGGATCTC TGAAGTCCTC1020
 CCAACTAGGC AGAGAAATCG ATGATCATGA CGCAGTCTG AGGTTTAATG GGGCACCCAC1080
 AGCCAACTTC CAACAAGATG TGGGCACAAA AACTACCATT CGCTGATGA ACTCTCAGTT1140
 GGTACCACA GAGAAGCGCT TCCTCAAAGA CAGTTTGTAC AATGAAGGAA TCCTAATTGT1200
 ATGGGACCCA TCTGTATACC ACTCAGATAT CCCAAAGTGG TACCAGAATC CGGATTATAA1260
 TTTCTTTAAC AACTACAAGA CTTATCGTAA GCTGCACCCC AATCAGCCCT TTTACATCCT1320
 CAAGCCCCAG ATGCCTTGGG AGCTATGGGA CATCTTCAA GAAATCTCCC CAGAAGAGAT1380
 TCAGCCAAAC CCCCCATCCT CTGGGATGCT TGGTATCATC ATCATGATGA CGCTGTGTGA1440
 CCAGGTGGAT ATTTATGAGT CCCTCCCATC CAAGCGCAAG ACTGACGTGT GCTACTACTA1500
 CCAGAAGTTC TTGCATAGTG CCTGCACGAT GGGTGCCTAC CACCCGCTGC TCTATGAGAA1560
 GAATTTGGTG AAGCATCTCA ACCAGGGCAC AGATGAGGAC ATCTACCTGC TTGGAAAAGC1620
 CACACTGCCT GGCTTCCGGA CCATTCACTG CTAAGCACAG GCTCCTCACT CTTCTCCATC1680
 AGGCATTAAA TGAATGGTCT CTTGGCCACC CCAGCCTGGG AAGAACATTT TCCTGAACAA1740
 TTCCAGCCTG CTCCTTTTAC TCTAGGGGCC TCTGTCAGCA AGACCATGGG GACTTCAAGA1800
 GCCTGTGGTC AGGAAATCAG GTCCAGCCTT CCCTGTAGCC AGACAGTTTA TGAGCCCAGA1860
 GCCTCCTGCC ACACACATGC ACACATATCT AGCATTCTTT CCAGACAGCA TCCTCCCCCG1920
 CTTCCACCTT GGTAGATGCA AGGTCTATCT CTCCTCATG GGTGGCCAAA GCTGGGCTTT1980
 GTTTTTCCCA GCAGAAATGAT GCCATTCTCA CAAACCAATG CTCTATATTG CTTNGAAGTC2040
 TGCATCTAAA TATTGATTTT ACGNTTTTAA AGNAAATTCT NNCTTAAATT ACAATTGTGC2100
 CCAATGCAGG GTGGNCTCTN NGGGGGGCAA GTAGGTGGTA CAGGGGATTG GAAACATCCT2160
 CCGCGCCTCC AGAGAAAAGT TGCTCCCGAG GTCCATGCCC CTGGAACGTG TTCCTATCAC2220
 TCTGGCTGGT TGGGCTGGTC CTTAGACTGG GTGCTTATGA TTTAAAGGGT CTTGGTTAAG2280
 CCCACTTTCC CTCTCCATGT GGAGATGGAA GGTAGAGAAG GATACAGTGT CTATCCTCAA2340
 GTTGCTACGG TTCAGTGAGA GAGGCAGACA TCTGAACAGG NCAGGTAGGA TTCAGTGTGC2400
 TCAGTGCCT GGGGATTTGG AGAGAGATGG GCTTGCTCTC TCTGTGCACC CAGGAGGGCC2460
 ACGCACTTAA AACTGTGTTT GTGGATCAGA GAAGGCTTTA TAGCACAGGG GGCATTTCAGA2520
 TGAGTCTTAG AGGAAGAGAA GAAACATGGC AAGCAGATTA CATCTGAGCC GTTTGAATTG2580
 TGTTTTTCTT TCTTCCCATG TTTATTTTCT AAGATCTACC TGAAGTTAGN AGACTCAAGA2640
 TATTTTTTTT GGAAACCTCC TACCCATGTC TGAGGTAGCA AGTGCAGCCT CACGACAGAT2700
 ACCAGGCAAT CCAGAGCCAC AAAACGTGAT TCCTCCAGGC TCTGCCTGGC CTGACCCTGT2760
 CCTGTCTAGT GGGTTTACAT ACCAGTCCCA TTCTTCCTTT TCAATACCTA CCCCCAAATC2820
 TTCTCCTAAC CACCATCTGT TTTTTTTTAT TTAAGCATT TTTTGCTTTA AAAGCATCCT2880
 GACCCCAATT TCTTTGAGCT CACGGGCCCT TTGCTGAAGG TCTCTCAGGG TGAGTGGTG2940
 TGGCTCTCTG GACTTAACGT CACTCTCAGN AGGTGAGAAC CTTNGGAGAT CAGAATCAT3000
 TCTACCAGG TGTGAGAGGT GTGGNTANGC AGATTGCAAT GCTCTGCACC TCTTNCCTTG3060
 CAAGTGAGNC AACTTNCAGG NCTCTCTGGG NCAGAGGCTG GCCCACTGTA GTTTGCAGAC3120
 ATGCTCTCCA GATGNTTTT ACTAAGTCCC CTCTCCCTGN ATANGGGAAT CCTGNCTGGN3180
 ACCAGCGCAN GCCCTNNGGT GTNGGANNGA GGTTNAAAAG ACTTGNCACA GGNATACCA3240
 AGTNCATGCT GNTAGANGCC AGGATTCCTA GACCCAGGGC TCTGCACTCT CAAGGCTGGC3300
 CCCATGTGCT CAAGGGGGTC TAATGTTTGG GCTCCAAACT AACCATCTCG GAGCTGGGCT3360
 CCTCATTTAC TGCCAAACCC TCAGNCTTAT GTAGCNTAGA AAGGGCCCTG GANGTGNAGA3420
 AAGCCTGGAT TTTCAAATTG ATGCTCCCCT ACTNGACTAG NCTGTGCCAC TCNTGGGCAA3480
 ATGCTCTTCC TTGAGCCTGT TTCCACACCT GTAAAGTGGG GATGATGATC CTATCTCACT3540
 GCTTTTNGTG NAGGATTACA GGNNAAGCA CCTGTCTGG CTCTGTACCT GGCACGTAGT3600
 ANGGTGCTCA GTTCATGCTG GTTTCCTTCC TGCCTTTAGT AGGGACCTGC TCTGTGCTCA3660
 CACCTCGGCT GCATGCACCC TGCTGTGACG GAGGCTAGTG TGGGAAGAGT CCTGTCTCA3720
 GGGAAATTAAC TGTCTTATTG GGAGACAACA ACTGTCTCTC CGCTGCCTGC AGCTNCCAAT3840
 TGNCAAAGCA GTGGACAACA CAGAACACGN CCCTCCTCCT TAAGTGTCTG ATAGGACAAG3900
 CTGATTCTGC TTGGGAATGG GCGGANCACG NTGGGCTGCT TAACTGCTGT ATTTGACACA3960
 CCCCTTACCC CTCTCTGGGC CCATGAATTC CTGGCTTGGT TTATGTTCTG CGACAGCAGG4020
 CTGATTTTAA TCTTCGAATC ATGACACTGA GTGCAGAGGA GGTGGCATTG TTTAATTATT4080
 ACATACATGT TNGGTGTGAA GACTGGGACG AACTGGGTA GAATCTAGTT TTTAATTATT4140
 ATTAATATAA AGGATCAAAT TAATTTAAAT ATGAATCTGA AGTCCACAGA ACTTTNNNNN4140
 AAGTGCTGTC CAGGCCAACA CTTTGGTAAA ATGCAAATTA TGATATGGAC GTTATCATTG4200
 GTCTGGTGAG ATGTTTCATA TTTGTGACAG TTAATTTAAA AATTATGACT TAATGCTGCC4260
 TGTGTCTATG GGGTTCTGTC TTCTTTGATA GCCATCTATT CATCTGGATC ATGGGACCCT4320
 CTCTAATCCT TCCACCAATC AAATAAGCTA TTGCTATTGG TTTGGAGTTG AGATATCAGT4380
 CTCGGAAACT TCTGAAAAAT GCTAATAATT ACCCAAGGAT TATGTCAAAT TTTAAAATAA4440
 ATGTGTGTGT GTTTCTTT

(2) INFORMATION ON SEQ ID NO. 615:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 1562 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 615:

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TGGAGGCAGC TAGCGCGAGG GTGGGGAGCG CTGAGCCGCG CGTCGTGCCC TGCGCTGCCC 60
AGACTAGCGA ACAATACAGT CAGGATGGCT AAAGGTGACC CCAAGAAACC AAAGGGCAAG 120
ATGTCCGCTT ATGCCTTCTT TGTGCAGACA TGCAGAGAAG AACATAAGAA GAAAAACCCA 180
GAGGTCCCTG TCAATTTTGC GGAATTTTCC AAGAAGTGCT CTGAGAGGTG GAAGACGATG 240
TCCGGGAAAG AGAAATCTAA ATTTGATGAA ATGGCAAAGG CAGATAAAGT GCGCTATGAT 300
CGGGAAATGA AGGATTATGG ACCAGCTAAG GGAGGCAAGA AGAAGAAGGA TCCTAATGCT 360
CCCAAAAGGC CACCGTCTGG ATTCTTCCTG TTCTGTTTCTG AATTCCGCCC CAAGATCAAA 420
TCCACAAACC CCGGCATCTC TATTGGAGAC GTGGCAAAAA AGCTGGGTGA GATGTGGAAT 480
AACTTAAATG ACAGTGAAAA GCAGCCTTAC ATCACTAAGA CGGCAAAGCT GAAGGAGAAG 540
TACGAGAAGG ATGTTGCTGA CTATAAGTCG AAAGGAAAGT TTGATGGTGC AAAGGGTCCT 600
GCTAAAGTTG CCCGGAAGAG GGTGGAAGAG GAAGATGAAG AAGACGGGGG GGGGGGGGGG 660
GGGGGGGGGG GGGGGACGTA TAGTCGGGTC GGCTGCTGGA GTAGCCCAAA AGAAGGGGAG 720
CGCCGTAATT GACACATCTC TTATTTGAGA AGTGTCTGTT GCCCTCATTG GGTTTAATTA 780
CAAAATTTGA TCACGATCAT ATTGTAGTCT CTCAAAGTGC TCTAGAAATT GTCAGTGGTT 840
TACATGAAGT GGCCATGGGT GTCTGGAGCA CCCTGAAACT GTATCAAAGT TGTACATATT 900
TCCAAACATT TTTAAAATGA AAAGGCACTC TCGTGTCTCT CTCACTCTGT GCACTTTGCT 960
GTTGGTGTGA CAAGGCATTT AAAGATGTTT CTGGCATTTT CTTTTTATTT GTAAGGTGGT1020
GGTAACTATG GTTATTGGCT AGAAATCCTG AGTTTTCAC TGTATATATC TATAGTTTGT1080
AAAAAGAACA AAACAACCGA GACAAACCCT TGATGCTCCT TGCTCGGCGT TGAGGCTGTG1140
GGGAAGATGC CTTTTGGGAG AGGCTGTAGC TCAGGGCGTG CACTGTGAGG CTGGACCTGT1200
TGACTCTGCA GGGGGCATCC ATTTAGCTTC AGGTGTCTCT GTTTCTGTAT ATAGTGACAT1260
AGCATTCTGC TGCCATCTTA GCTGTGGACA AAGGGGGGTC AGCTGGCATG AGAATATTTT1320
TTTTTTTAAG TGCGGTAGTT TTTAACTGT TTGTTTTTAA ACAAACTATA GAACTCTTCA1380
TTGTCAGCAA AGCAAAGAGT CACTGCATCA ATGAAAGTTC AAGAACCTCC TGTACTTAAA1440
CAGGATTCGC AACGTTCTGT TATTTTTTTT GTATGTTTAG AATGCTGAAA TGTTTTTGAA1500
GTTAAATAAA CAGTATTACA TTTTAAAAA AAAAAAAAAA AAAAAAAAAA AAAAAAAAAA1560
AA

```

1562

(2) INFORMATION ON SEQ ID NO. 616:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 2278 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 616:

```

GGCAATTTCC GTTAGGTGCT GAAGGCTGTG GCGCGCGGCT GTCCCCATTC CCACGTGAAG 60
CGCTACGCTA GCATCGCTCG GCTGGCGGCT CCCAGCTCGC CGCGGAGCAG TCCCGGCAGC 120
AGCGGGGGAC CGGAAGTGGC TCGCGGAGGC TCAGAAGCTA GTCCCGGAGC CCGGCGTGTG 180
GCGCCTCGGA GCACGGTGAC GCGCGCATGT CCCTAATCTG CTCCATCTCT AACGAAATGC 240
CGGAGCACCC ATGTGTATCC CCTGTCTCTA ATCATGTTTA TGAGCGGCGG CTCATCGAGA 300
AGTACATTGC GGAGAATGGT ACCGACCCCA TCAACAACCA GCCTCTCTCC GAGGAGCAGC 360
TCATCGACAT CAAAGTTGCT CACCCAATCC GGCCCAAGCC TCCCTCAGCC ACCAGCATCC 420
CGGCCATTCT GAAAGCTTTG CAGGATGAGT GGGATGCAGT CATGCTGCAC AGCTTCACTC 480
TGCGCCAGAG CTGCAGACAA CCGGCCAAGA GCTGTACAC GCTCTGTACC AGCACGATGC 540
CGCCTGCCGT GTCATTGCCC GTCTCACCAA GGAAGTCACT GCTGCCCGAG AAGCTCTGGC 600
TACCCTGAAA CCACAGGCTG GCCTCATTGT GCCCCAGGCT GTGCCAAGTT CCAACCAAG 660
TGTTGTGGGT GCGGGTGAGC CAATGGATT TGGTGAGCTG GTGGGAATGA CCCCAGAGAT 720
TATTGAGAAC CTTCAAGACA AAGCCACTGT GCTAACACG GAGCGCAAGA AGAGAGGGAA 780
GACTGTGCC T GAGGAGCTGG TGAAGCCAGA AGAGCTCAGC AAATACCGGC AGGTGGCATC 840
CCACGTGGGG TTGCACAGTG CCAGCATTCC TGGGATCCTG GCCCTGGACC TCTGCCCGTC 900
CGACACCAAC AAGATCCTCA CTGGTGGGGC GGATAAAAAT GTCGTTGTGT TTGACAAAAG 960
TTCTGAACAA ATCTGGCTA CCCTCAAAGG CCATACCAAG AAGGTCACCA GCGTGGTGT 1020
TCACCCTTCC CAGGACCTGG TGTTTTCTGC TTCCCCGAT GCCACTATCA GGATTTGGTC 1080
GGTCCCCAAT GCCTCTTGTG TACAGGTGGT TCGGGCCCAT GAGAGTGCTG TGACAGGCCT 1140
CAGCCTTCAT GCCACTGGCG ACTATCTCCT GAGCTCCTCC GATGATCAGT ACTGGGCTTT 1200
CTCTGACATC CAGACAGGGC GTGTGCTCAG CAAGGTGACA GATGAGACCT CCGGCTGCTC 1260
TCTCACCTGT GCACAGTTCC ACCCTGACGG ACTCATCTTT GGAACAGGAA CCATGGACTC 1320
TCAGATCAAG ATCTGGGACT TGAAGGAACG TACTAATGTG GCCAACTTCC CTGGCCACTC 1380
GGGCCCCATC ACTAGCATCG CCTTCTCTGA GAATGGTTAC TACCTGGCTA CAGCGGCTGA 1440
TGACTCCTCT GTCAAGCTCT GGGATCTGCG CAAGTTAAGA ACTTTAAGAC TTTGAGCTG 1500
GATAACAAC TTAGAGTAAA GTCACTGATC TTTGACCAGA GTGGTACCTA CCTGGCTCTT 1560
GGGGGCACGG ATGTCCAGAT CTACATCTGC AAACAATGGA CGGAGATTCT TCACTTTACA 1620
GAGCATAGCG GCCTGACCAC AGGGGTGGCC TTCGGGCATC ACGCCAAGTT CATCGCTTCA 1680
ACAGGCATGG ACAGAAGCCT CAAGTTCTAC AGCCTGTAGG CCCTGGCCCT TCTGATGGAA 1740
GCTGGGCCTC ATCTCAGTAG AGGGGTAGAA TTAGGGTTTG GGGGGGGGTG GGGGGAATCT 1800
ATGGGGGGAG GGGGCTCTGT GGGGTGGGAC ATTACATCA TTTACTCTG GTCTGAGTGG 1860
TGGCCTGAGA ACCATGGTGG CATGGACCAC CCTCATCCAT GCAACTCCAG GCCCCATGGG 1920
AACGGATGTG GAAGGAAGAA CTGTCAACCT CTTAAGGCCC AGGGTCGGAG CCCAGGGCCT 1980
CTCCCTTCCT GTCGTTCAAT GGACGTGGTG GTGGCTGTTC CACACCCATT TTGTTGAGT 2040
TCCTGTGAGA CAGGAGAGGC TGAGCCAAGG GAACTGTGAA GGGGATGGGC AGGAGGGCTT 2100
GTGCAGGGTT TTGTAAGCAG TGATCTAGTT TCATTAAAAA AAGAAAACAA TAACCATAAC 2160
CACCTCCCCG TGTCTGTCTG CACCAGGAGC ACCTGGGACT GGGGAAGTCAA GGGGAGGGAG 2220
CACACACTGG GACACTGGCT TCCGGGAAGC CCATCTTCCT TTCCTTTCAC AGTCTTTA 2278

```

(2) INFORMATION ON SEQ ID NO. 617:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 931 base pairs
- (B) TYPE: Nucleic acid
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Partial cDNAs produced from individual ESTs by assembling and editing

(iii) HYPOTHETICAL: NO

(iii) ANTI-SENSE: NO

(vi) ORIGIN:

- (A) ORGANISM: HUMAN
- (C) ORGAN:

(vii) OTHER ORIGIN:

- (A) LIBRARY: cDNA library

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 617:

```

CAGGGGCGTG CAGCCCGCTT GCCAATCAGA GCGCGGCTGA GCGGCCCCGC AGCCAACCCC 60
CGAGGAGCGG CCGGCTGGCG TCCGCCGCGC CCAGGAGTTG GGGATGTCCT ACAAACCCAT120
CGCCCCTGCT CCCAGCAGCA CCCCTGGCTC CAGCACCCCT GGGCCGGGCA CCCCAGTCCC180
TACAGGAAGC GTCCCGTCGC CGTCGGGCTC AGTGCCAGGA GCCGGCGCTC CTTTCAGACC240
GCTGTTTAAC GACTTTGGAC CGCCTTCCAT GGGCTACGTG CAGGCGATGA AGCCACCCGG300
CGCCCAGGGC TCCCAGAGCA CCTACACGGA CCTGCTGTCA GTCATAGAGG AGATGGGCAA360
AGAGATCCGG CCTACCTATG CTGGCAGCAA GAGCGCCATG GAGCGCCTGA AGAGAGGTAT420
CATCCATGCC CGGGCCCTAG TCAGAGAGTG CCTGGCAGAG ACAGAGCGGA ACGCCCGCAC480
GTAACAGGAA GCGCCTCGGC CTCAGCGTCT GGACCTATCC GGCCACTGCA GAGCACCCGC540
TTCTCCCTGG CCTTCATCCC GAGTTGCACT AACCATCCTG GGCTTCCTGT CCTGTGTCCC600
TTGGTGGGTC CCTCCAGGA ACCAAGGAGT GGCCCTCCAG GTGGCAGCAC TAAGGACACC660
CCCCQACAAC AAGAGTTAGC AGCGAGGTCC GCATGAGTCC CACCCATGAC CTGCCGACAG720
TGTGCCCCAC CGGAACCTTT GTGGCCCCTA CCGCTCAGCC CTTCCCAGCA CTTCTCCCAC780
TTTGTCCCGA GCCTCCTTCT CGCCCAGCAG GGGCACAGGC CTGGCACCTC CCTGCCTTGT840
GTCCTGAGCC ATAGTGACTC TTTTATCTGT GTGTCTTTTG CTAAATATGC CCTTTTATA900
TTAATAAAAG ATGATTGGA GTTGTGCTCT C

```

931

(2) INFORMATION ON SEQ ID NO. 618:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 447 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 618:

```

ELPSSPPPGL PEVAPDATST GLPDTAAPE TSTNYPVECT EGSAGPQSLP LPILEPVKNP 60
CSVKDQTPLQ LSVEDTTSPN TKPCPPTPTT PETWGGGGGG APSSTPCSAH LTPSSLFPSS120
LESSSEQKFY NFVILHARAD EHIALRVREK LEALGVDPGA TFCEDFQVPG RGELSCLQDA180
IDHSAFIILL LTSNFDCLRS LHQVNQAMMS NLTRQGSPDC VIPFLPLESS PAQLSSDTAS240
LLSGLVRLDE HSQIFARKVA NTFKPHRLQA RKAMWRKEQD TRALREQSQH LDGERMQAAA300
LNAAYSAYLQ SYLSYQAQME QLQVAFGSHM SFGTGAPYGV RMPFGGQGPL GAPPPFPTWP360
GCPQPPPLHA WQAGTPPPPS PQPAAFPQSL PFPQSPAFFT ASPAPPQSPG LQPLIIHHAQ420
MVQLGLNNHM WNQRGSQAPE DKTQEAE                                     447

```

(2) INFORMATION ON SEQ ID NO. 619:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 205 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 619:

```

ADAGGGTERS LLSLPPELLV LPGTDGAAPG GFWEPHVIWD WGALWGQNAL WGPAGPGSPA 60
TLSHLAGVPA AATPARMAGW HPPTALPTAS SLSTVTALPA VPSLPYGLTR TPSEPRAATP120
HYPPRTDGTA GAEQPHVEPE RVPGARGQDA GGRMTACPCL TTWGTPLDPG IGQDPIEHFPG180
LPCALWTVED EVICHFQDIV REPFI                                     205

```


(2) INFORMATION ON SEQ ID NO. 620:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 409 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 620:

```

KSRLSVTLMP VQLSEHPewn ESMHSLRISV GGLPVLASMT KAADPRFRPR WKVILTFEFG 60
AAILWLLCSH RPAPGRPPH NAHNWRLGQA PANWYNDTYP LSPPQRTFAG IRYRIAVIAD120
LDTEPTAQDE NTWRSOLKKG YLTLSDSGDK VAVEWDKDHG VLESHLAEKG RGMELSDLIV180
FNGKLYSVDD RTGVVYQIEG SKAVPWVILS DGDGTVEKGF KAEWLAVKDE RLYVGGLGKE240
WTTTTGDVVN ENPEWVKVVG YKGSVDHENW VSNYNALRAA AGIQPPANLI HESACWSOTL300
QRWFFLPRA SQERYSEKDD ERKGANLLS ASPDFGDIIV SHVGAVVPTH GFSSFKFIPN360
TDDQIIIVALK SEEDSGRVAS YIMAFTLDGR FLLPETKIGS VKYEGIEFI 409

```

(2) INFORMATION ON SEQ ID NO. 621:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 249 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 621:

```

KLSPDGLAQC FRFELNELDA FVFHASDLGL RQGEAPVQRE GHDVGGDSAA VLLGFEGHND 60
LVVGVGDELE GREAVSGDHR PDVAHSDVAE VRGGAQQQVG ALALVLLAV ALLAGAARQE120
EPALQRVTPA GRLMDEVSWR LDAGSSPQGV VVGHPVLVVH AALVAHHLHP LRVLVHHITR180
SGRPLLAQAA HVQTLVLHCQ PFGLEAFLHG AVAVGQNHGP HGFAAFDLVD DPRPVIHGVE240
FPIENNQVG 249

```

(2) INFORMATION ON SEQ ID NO. 622:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 255 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 622:

```

AAAPVSLHDA AGDLRRDPGG GGGGGVPHGG GEGQEVVPAE PGVPAPQHA E PVAAAGAAQ 60
LQTEEQPGLQ RLRLGPVRGA ARGGDARVRG PRGDRRVNPE SARALLPGDP QGPGTAAPRA120
LGLPPRCEPV GAPLAALALA RERRERGRFP RPCKCLFFNS SQCELCCECV RGGAPALSRR180

RVATPCPCPM VCNSDFAHRS TVPPSAHPFT LTPTLSLNTF IIVRRGRWDF GRSAAATASG240
GLIFIFALRW LKAFT                                     255

```

(2) INFORMATION ON SEQ ID NO. 623:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 196 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 623:

```

INAFSHRNAK ININPPDAVA AALRPKSQRP RLTIKVFSE SVGVSVNGCA LGGTVERCAK 60
SELQTIGQGH GVATRRRLSA GAPPRTHSQQ SSHWHEELKNK HLQGRGKRPR SRRSRARASA120
ARGAPTGSQR GGSPSARGAA VPGPCGSPGS RARALSGFTR RSPRGPRTRA SPPRAAPLTG180
PSRSRWSPGC SSVCS C                                     196

```

(2) INFORMATION ON SEQ ID NO. 624:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 242 amino acids
 - (B) TYPE: Protein

(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 624:

```

VESHRRATH TTVRSPETAR GWKPWPHRLS RYVHSPGRQP HGHGQHLFCF SGRRAFGGHP 60
RQGARASLLA LGLENSPGGS SPEERLGRLA VAGPPRGAQN VSQAGPEAEA PPLRFGHAWG120
AQTPRLGAPG PWTPLPTLPS HIPPFWSQTP AQRKEGFTEE GQGRAWPQGG DEDISGPGSC180
RLWEEEEPCV CKLLGLAARP TAGPSLDPCT WPSSCPLAAP GLGTGIEPRG LGWLGQGRDR240
EG                                                                 242

```

(2) INFORMATION ON SEQ ID NO. 625:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 216 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 625:

```

GLVMPGELRR PGLGPQAHGL PSPLCPPIFF LFGPRHQHKE RRGSRQKARA EPGPREGMRT 60
FPVQVAAGCS GRKSHASVNC WGWRPAPLQG PALTPARGHP AALWLPLALA QASSLEGWAG120
WARAGTGRGS TSDPDVGWLC PPRREAQOTS YTKAKSTIGE PRSHFMGRRP RPQGPQSKAR180
GRFIPEDSPP GAAPAWGGVS RPLGCLSVCG TPWSTP                               216

```

(2) INFORMATION ON SEQ ID NO. 626:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 299 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 626:

PGISVSVDKM ESSPFNRRQW TSLSLRVTA ELISLVNKNKS SAIVEIFSKY QKAAEETNME 60
KKRSNTENLS QHFRKGTILTV LKKKWENPGL GAESHTDSL NSSTEIRHRA DHPPAEVTSH120
AASGAKADQE EQIHPRSLR SPPEALVQGR YPHIKDGEDL KDHSTESKMM ENCLGESRHE180
VEKSEISENT DASGKIEKYN VPLNRLKMMF EKGEPTQTKI LRAQSRASG RKISENSYSL240
DDLEIGPGQL SSSTFDSEKN ESRRNLELPR LSETSIKDRM AKYQAAVSKQ SSSPTIPMS 299

(2) INFORMATION ON SEQ ID NO. 627:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 94 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 627:

DSAPSPGFSSH FFFNTVRVPF LKCWERFSVL LLFFSMFVSS AAFWYLENIS TIADDLFLT60
RESSLAVTLN DSEVHCRLN GDDSILSTDT EIPG 94

(2) INFORMATION ON SEQ ID NO. 628:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 765 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 628:

```

IRPVVQLTAI EILAWGLRNM KNFQMASITS PSLVVECGGE RVESVVIKNL KKTPNFPSSV 60
LFMKVFLPKE ELYMPPLVIK VIDHRQFGRK PVVGQCTIER LDRFRCDPYA GKEDIVPOLK120
ASLLSAPPCR DIVIEMEDTK PLLASKLTEK EEEIVDWWSK FDASSGEHEK CGQYIQKGY180
KLKIYNCELE NVAEFEG LTD FSDTFKLYRG KSDENEDPSV VGEFKGSFRI YPLPDDPSVP240
APPRQFRELP DSVPQECTVR IYIVRGLELQ PQDNNGLCDP YIKITLGKKV IEDRDHYIPN300
TLNPVFGRMY ELSCYLPQEK DLKISVYDYD TFTRDEKVG E TIIDLENRFL SRFGSHCGIP360
EEYCVSGVNT WRDQLRPTQL LQNVARFKGF PQPILSE DGS RIRYGGRDYS LDEF EANKIL420
HQHLGAPEER LALHILRTQG LVPEHVETRT LHSTFQPNIS QGKLQMWVDV FPKSLGPPGP480
PFNITPRKAK KYYL RVIIWN TKDVILDEKS ITGEEMSDIY VKGWIPGNEE NKQKTDVHYR540
SLDGE GNFNW RFVFPFDYLP AEQLCIVAKK EHEWSIDQTE FRIPPRLI IQ IWDNDKFSLD600
DYLGFLELDL RHTIIPAKSP EKCR LDMIPD LKAMNPLKAK TASLF EQKSM KGWWPCYAEK660
D GARVMAGKV EMTLEILNEK EADERPAGKG RDEPNMNP KL DLPNRPETSF LWFTNPCKTM720
KFIVWRRFKW VIIGLLFLLI LLLFVAVLLY SLPNYLSMKI VKPNV 765

```

(2) INFORMATION ON SEQ ID NO. 629:

- (i) SEQUENCE CHARACTERISTIC:
- (A) LENGTH: 289 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 629:

```

ETQVVIQRKL VIVPYLNDQP GWDSKFRLVN TPEMLFFRND TELFGWKVVK RENKSPVKIP 60
FTIQRSVMDI CFLFVFFIAR NPAFDVDVTH FLSCDAFLVQ DNVLGVPDDH TQVVF LGFP120
CDVERRAWWP QTLGENIHPH LKFS LGNVGL EGAVQSPCFH VLRDQPLSPE DVKSKPLFRG180
PEVLVQDFVG FKFIQAVVSS SISDSTPIFG KDGLWEAFES GDILKQLCWS QLISPGIDSR240
NTVLLWYAAV GPKAGKESVF QINNCFSYFF IPGKGVIIID RNFQVFFLR 289

```

(2) INFORMATION ON SEQ ID NO. 630:

- (i) SEQUENCE CHARACTERISTIC:
- (A) LENGTH: 824 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 630:

```

RVSVLAAASS ALPVAPREAG VTNWPAGCVP EVRSTGEKEV AKTLHRRSRP EWCGARDPPA 60
MLLFVLTCLL AVFPAISTKS PIFGPPEEVNS VEGNSVSITC YYPPTSVNRH TRKYWCRQGA120
RGGCITLISS EGYVSSKYAG RANLTNFPEN GTFVVNIAQL SQDDSGRYKC GLGINSRGLS180
FDVSLEVSQG PGLLNDTKVY TVDLGRVTI NCPFKTENAQ KRKSLYKQIG LYPVLVIDSS240
GYVNPNTYGR IRLDIQGTGQ RLFSVVINQL RLSDAGQYLC QAGDDSNSNK KNADLQVLKP300
EPELVYEDLR GSVTFHCALG PEVANVAKFL CRQSSGENCD VVVNTLGKRA PAFEGRILLN360
PQDKDGSFSV VITGLRKEDA GRYLCGAHSD GQLQEGSPIQ AWQLFVNEES TIPRSPTVVK420
GVAGGSVAVL CPYNRKESKS IKYWCLWEGA QNGRCPLLVD SEGWVKAQYE GRLSLLEEPG480
NGTFTVILNQ LTSRDAGFYW CLTNGDTLWR TTVEIKIIEG EPNLKVPGNV TAVLGETLKV540
PCHFPCKFSS YEKYWCKWNN TGCQALPSQD EGPSKAFVNC DENSRVLVSLT LNLVTRADEG600
WYWCGVKQGH FYGETAAVYV AVEERKAAGS RDVSLAKADA APDEKVLDSG FREIENKAIQ660
DPRLFAEEKA VADTRDQADG SRASVDSGSS EEQGGSSRAL VSTLVPLGLV LAVGAVAVGV720
ARARHRKNVD RVSIRSYRTD ISMSDFNSR EFGANDNMGA SSITQETSLG GKEEFVATTE780
STTETKEPKK AKRSSKEEAE MAYKD FLLQS STVAEEAQDG PQEA 824

```

(2) INFORMATION ON SEQ ID NO. 631:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 267 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 631:

```

ADIAGPRCLP LFNCHIDGCS LSIEVALLHS TPVPALISPG HQVQGGQDKP AVLVTVHEGL 60
AGAFVLAGQG LAARVIPLAP VFLVRGEFAW KVTGDLESLS QHSRDIPWYL EVWFSFDNLD120
LHGGPPESIA VGQTPVEAGV PAGELVEDDS EGAVAWLLQQ GEAALVLGLN PPLAVHQQGA180
AAILGPFPET PVLDAFAFLT VVGAEHGHRA SCHPLHHSQA AGNRGLLIDE ELPGLORRAF240
LQLTIRMGST QVAPCILLPQ ACDHHTTE 267

```

(2) INFORMATION ON SEQ ID NO. 632:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 140 amino acids

(B) TYPE: Protein

(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 632:

GETRVHSQQG GGIKAPSWDW FFREPGPLVK GLLGHVKQYL EQPRPWGYQV ERREGRRRLPC 60
THLPWWAGFS LLGSTLPSPV HDTPRASPC PRPSYRLLFQ DITDNPERME KGGAWVPAVS120
GQKEVACGNL RSPHPRFPKR 140

(2) INFORMATION ON SEQ ID NO. 633:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 127 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 633:

VFPCHLVGAG PTPATTSGTA KGSTRCDYPG PCWQLRIPGT CSDPVSGSSE SQEPRMRALC 60
SPSSKTQGSF PRKGAHVPQR GWLPGCYLFY PTSAAESQGE TASHPKPLGF SREKNLSQKH120
DLFSGCK 127

(2) INFORMATION ON SEQ ID NO. 634:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 140 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 634:

HHQKHMQGKG SYWASGLLSP WLGRKGREDG WGSLEFGIDDV HEFGLEGSTT HKEAIIHRLA 60
 GQLLAGCP SH RASINDTGAL SHRIROVGLQ PSSELLVYFL GLLGCCSLAS TNGPHRLIGQ120
 DDLAPVLHVI CDDLLVWWE G 140

(2) INFORMATION ON SEQ ID NO. 635:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 101 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 635:

KVIADNVKDW SKVVLAYEPV WAIGTGKTAT PQQAQEVHEK LRGWLKSNVS DAVAQSTRII 60
 YGGSVTGATC KELASQPDVD GFLVGGASLK PEFVDIINAK Q 101

(2) INFORMATION ON SEQ ID NO. 636:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 329 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

- (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 636:

DSIFPLWAVL ALSPPGIRVR MKKSSVSGMT AAGWVWGEA EGKAALRLGV EFLEVWGGGR 60
 VENLEKSQPA RAERECERGS SEGARNVGG SGRSVAVAL VHQHGVRLLG DLQQRVHVGA120
 APAPQVAGLP PLRAALVVVG AHLHHLGGLE HFHLALADLL DVEGEGWHLV DRGLGARVHH180
 VVGREGFAQL VPRRLQFLAP LGGHQARAQL VHALLQGVPR LLQVFLGLEA RLLQVLAGTH240
 LGLLHLLLGE GLLEVHAPQ ALRLIRSARD SSITSSTSTA SDESSSAAA SSSGRSPSPS300
 SSPSFSGSAS DSFSDLLMLS LAGSFTSSW 329

(2) INFORMATION ON SEQ ID NO. 637:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 263 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 637:

```
GRLPGYPDRR GPGASSAGAQ AAEEPSGAGS EELIKSDQVN GVLVLSLLDK IIGAVDQIQL 60
TQAQLEERQA EMEGAVQSIQ GELSKLGKAH ATTSNTVSKL LEKVRKVSVN VKTVRGSLE120
QAGQIKKLEV NEAELLRRRN FKVMIIYQDEV KLPAKLSISK SLKESEALPE KEGEELGE180
RPEEDAAALE LSSDEAVEVE EVIEESRAER IKRRACGAWT TSTRPSPRRR WRRPRCVPAR240
TWRRRASRPR KTWRRRGTPW RSA 263
```

(2) INFORMATION ON SEQ ID NO. 638:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 205 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 638:

```
SGDLRLLVDT SKVQEAWVPS QDTHHTQELL AVQGSLSVSGY RPPGGGFGAAP VHEDPHLLGP 60
ASRGAPETAA FFFFFFFFFFP EQHLRVGLLL LPPRLSPRPG PAWPVPNEVG WPGHLHQGGQ 120
LLAGTNKPFH LAMVVVFSMD RGPETRAGRG REHTSLGVGT SLXTPQQLXG PRXXFPXAVQ 180
ASPXPGVCSL AWVELCHIXD KQXGG 205
```

(2) INFORMATION ON SEQ ID NO. 639:

- (i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 171 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 639:

```
PVTPRDXPGA GGGSEXGPMQ HPGQSRPXPL AXPAPXWXML APCGALTCWA RLXLGLSAPX 60
LLIXDVTELD PSQAAHSWTW ASLHCXGKXX PRAXKLLRGX EAGAHPQASV FSAPPCPRFR120
ASVHREHHHH QVEGFISPC QQLSSLVQVA WPAHWIGDGP GWARSGAQSG R 171
```

(2) INFORMATION ON SEQ ID NO. 640:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 161 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 640:

```
ISRNEGVLVR GPKSPRSLLR SHSEPPALVL WRDHLVPGT DYCKDTALVP TEKNTGQQEH 60
TFSQYLATPH SELTITHGKW VHSSLWSDPA GLGRQEQHSS SSLSPRQRES LNCKRSGAYT120
VREKEKGGRK GFSRPPRDA HREGGKEREK SVLESEATLS K 161
```

(2) INFORMATION ON SEQ ID NO. 641:

(i) SEQUENCE CHARACTERISTIC:

- (A) LENGTH: 127 amino acids
- (B) TYPE: Protein
- (C) STRAND: individual
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 641:

CAYRTEKWKS HTVPCSPEVK LVLTLALRAF SSMEPLGLGR KARVSAHRHT SYLQDIDCLC 60
RGSTGQPTAN TAASLVASL LPVHPGDYSW INLPKNSAFI MSLFCSKTQN GSLPPRGRPS120
HHCIPNR 127

(2) INFORMATION ON SEQ ID NO. 642:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 136 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 642:

WGXGRVRVXG WXRKPMKXGI PPEXHGPITA DGHRLXXLP PXGXRCXXAD PKGXGLXALF 60
XKXPPXEXCL LSXXPXXPVT HRAGMEFNGX FWXXTLVHGQ TSLLXGYXTR LXXKIVCCHS120
SGXWSVCG LH RFHRNQ 136

(2) INFORMATION ON SEQ ID NO. 643:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 132 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 643:

GRXSRAWGLG CPSLLSPISL RLPVPPRPP NLRPPATPGA PTXPXQNTAX LKXLELSXX 60
LSGLGLMGXR AGTCTWVAXE AHEDXDTPRV FWXYXRWSS XPXAIATXGX SLXXGRPQRE120
XPXRVVXKXT TX 132

(2) INFORMATION ON SEQ ID NO. 644:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 131 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 644:

GVETTANSST SLRSTTLEKE VPVIFIHPLN TGLFRIKIQG ATGKFNMVIP LVDGMIVSRR 60
 ALGFLVRQTV INICRRKRLE SDSYSPPMISA GNRKSPTLST STGTSSWSQS FILHFSRRLD120
 SRTAVLRPLN F 131

(2) INFORMATION ON SEQ ID NO. 645:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 86 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 645:

LTNMSDHLFG WLLLEMAVVM FSGLCQPTDP CQVLEILLP RQYFSAGIKL LXVARPRTSK60
 DSCYSATVYT AHLSSYSHVLS SLVRLF 86

(2) INFORMATION ON SEQ ID NO. 646:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 96 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 646:

KAPNPSVLHT VRMQLIADRC CELYICKRCF TTSAGFITAS WSRVAILPAI PAKQTPENYP60
LRSGVLRKFL EPKIRRNPGF SFLRSKMYQ LRPGEH 96

(2) INFORMATION ON SEQ ID NO. 647:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 92 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 647:

SSACRCTTRS TGQQAASGR CGGPRGWGPS TGATPRQLTM NIPFQSIHFI TYEFLQEQVN60
PHRTYNPQSH IISGGLAGAL AAAARGPLDV LR 92

(2) INFORMATION ON SEQ ID NO. 648:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 280 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 648:

AVGSAALFKD GGGGTSAAEA GAAGQRLRSV NCLAYDEAIM AQQORIQQEI AVQNPLVSR 60
LELSVLYKEY AEDDNIYQK IKDLHKKYSY IRKTRPDGNC FYRAFGFSL EALLDDSKEL120
QRFKAWSAKS KEDLVSQGF EFTIEDFHNT FMDLIEQVEK QTSVADLLAS FNDQSTSDYL180
VVYLRLLTSG YLQRESKFFE HFIEGGRTVK EFCQQEVEPM CKESDHIHII ALAQALSFSI240
QVEYMDRGE GGTNPHIFPE GSEPKVYLLY RPHYDILYK 280

(2) INFORMATION ON SEQ ID NO. 649:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 244 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 649:

```
DHLQPQKNLC TCLAPGRGGQ QGSSGLEPAL FVEDIVVSRP VEKVDLGLGA LREDVRIGGA 60
ALAAVHVLHL DGHAELGQR NDVDVVALLA HGLHLLLAEL LDSPSTLDEV LEELALALQV120
ARGEQPQVDH KVVGGALVIE GGQQVGDRGL LLHLLNQVHE RVVEILNCEF SEALGHQVFL180
ALGRHSLEPL QLLAVIQQCL QVGESESPIE TVAVRPGLAD VRVLFVEVLD LLLIDVVIFS240
ILLV                                         244
```

(2) INFORMATION ON SEQ ID NO. 650:

- (i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 424 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
 (A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 650:

```
LTTTCVSSSA PSKTS LIMNP HASTNGQLSV HTPKRESLSH EEHPHSHPLY GHGVCKWPGC 60
EAVCEDFQSF LKHLNSEHAL DDRSTAQCRV QMQVVQLEL QLAKDKERLQ AMMTHLHVKS120
TEPKAAPQPL NLVSSVTLSK SASEASPQSL PHTPTTPTAP LTPVTQGGSV ITTSMHTVG180
PIRRRYSOKY NVPISADIA QNQEFYKNAE VRPPFTYASL IRQAILESPE KQLTLNEIYN240
WFTRMFAYFR RNAATWKNAV RHNLSLHKCF VRVENVKGAV WTVDEVEFOK RRPQKISGNP300
SLIKNMQSSH AYCTPLNAAL QASMAENSIP LYTTASMGNP TLGNLASAIR EELNGAMEHT360
NSNESDSSPG RSPMQAVHPV HVKEEPOPE EAEGPLSLVT TANHSPDFDH DROYEDEPVN420
EDME                                         424
```

(2) INFORMATION ON SEQ ID NO. 651:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 117 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 651:

STNAGCTAVR ATACKRQRAP ASHDDPPACE VYRTQSRPSA LESGIKCHSL QVRIGGFSTE 60
 LTSYSNDPNR PPDSRHRPL CHNHQHAHG GTHPQAVLRQ IQRAHEVSRY CAEPRI 117

(2) INFORMATION ON SEQ ID NO. 652:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 426 amino acids
 - (B) TYPE: Protein
 - (C) STRAND: individual
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: ORF

- (iii) HYPOTHETICAL: yes

- (vi) ORIGIN
 - (A) ORGANISM: HUMAN

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 652:

PEAGLFSCSE QSDFPEHIFI MIHTNLKKKF SCCVLVLLF AVICVWKEKK KGSYYDSFKL 60

QTKFQVLKS LGKLAMGSDS QSVSSSSTQD PHRGRQTLGS LRGLAKAKPE ASFQVWNKDS120
 SSKNLIPRLQ KIWKNYLSMN KYKVSYPGPG PGIKFSAEAL RCHLRDHVNV SMVEVTDFPF180
 NTSEWEGYLP KESIRTKAGP WGRCAVVSSA GSKSSQLGR EIDDHDAVLR FNGAPTANFQ240
 QDVGTKTTIR LMNSQLVTTE KRFLKDSLYN EGILIVWDPS VYHSDIPKWY QNPDYNFFNN300
 YKTYRKLHPN QPFYILKPQM PWELWDILQE ISPEEIQPNP PSSGMLGIII MMTLCDQVDI360
 YESLPSKRKT DVCYYYQKFF DSACTMGAYH PLYEKNLVK HLNQGTDEDI YLLGKATLPG420
 FRTIHC 426

(2) INFORMATION ON SEQ ID NO. 653:

- (i) SEQUENCE CHARACTERISTIC:
 - (A) LENGTH: 139 amino acids
 - (B) TYPE: Protein

(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 653:

RCVQGSHEVL SRKTSLLIAN PPGAAGPSGP QELALLSMGG KVIWVCRPRP IFLRMKTHL 60
CWFMVTCAAG FGDAEVCRSI SGGLOAVLPF SLWCWLCGLC GTFCPLARCT LGRGGCGCSA120
RSVAAARSAP TPVGIGSLC 139

(2) INFORMATION ON SEQ ID NO. 654:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 243 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN
(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 654:

WRQLARGWGA LSRASCPALP RLANNTVRMA KGDPKKPKGK MSAYAFFVQT CREEHKKKNP 60
EVPVNFAEFS KKCSEWRKTM SGKEKSKFDE MAKADKVRYD REMKDYGPAK GGKKKKDPNA120
PKRPPSGFFL FCSEFRPKIK STNPGISIGD VAKKLGEMWN NLNDSEKQPY ITKTAKLKEK180
YEKDVADYKS KGKFDGAKGP AKVARKKVEE EDEEDGGGGG GGGGGTYSRV GWWSSPKEGE240
RRN 243

(2) INFORMATION ON SEQ ID NO. 655:

(i) SEQUENCE CHARACTERISTIC:
(A) LENGTH: 110 amino acids
(B) TYPE: Protein
(C) STRAND: individual
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 655:

TEQEESSRRWP FGSIRILLLL ASLSWSIILH FPIIAHFICL CHFIKFRFLF PGHRLPPLRA 60
LLGKFRKIDR DLWVFLMFF SACLHKEGIS GHLALWFLGV TFSHPDCIVR 110

(2) INFORMATION ON SEQ ID NO. 656:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 356 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 656:

VGCSHAAQLH SAPELQTTRO ELSHALYQHD AACRVIARLT KEVTAAREAL ATLKPQAGLI 60
VPQAVPSSQP SVVGAGEPMD LGELVGMTPE IIQKLQDKAT VLTTERKKRG KTVPEELVKP120
EELSKYRQVA SHVGLHSASI PGILALDLCF SDTNKILTGG ADKNVVFVDK SSEQILATLK180
GHTKKVTSVV FHPSQDLVFS ASPDATIRIW SVPNASCVQV VRAHESAVTG LSLHATGDYL240
LSSSDQYWA FSDIQTGRVL TKVTDETS GC SLTCAQFHPD GLIFGTGTMD SQIKIWDLKE300
RTNVANFPGH SGPITSIAFS ENGYLATAA DDSSVKLWDL RKLRTLRLCS WITTLR 356

(2) INFORMATION ON SEQ ID NO. 657:

(i) SEQUENCE CHARACTERISTIC:

(A) LENGTH: 240 amino acids

(B) TYPE: Protein

(C) STRAND: individual

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 657:

LAQIPELD RG VISRCSQVVT ILREGDASDG ARVAREVGHI STFLQVPDLD LRVHGSCSKD 60
 ESVRVELCTG ERAAGGLICH LGEHTPCLDV RESPVLIIGG AQEIVASGMK AEACHSTLMG120
 PNHLYTRGIG DRPNPD SGIG GSRKHQVLGR VKHHAGDLLG MAFEGSQDLF RTFVKHNDIF180
 IRPTSEDLVG VGRAEVQGGD PRNAGTVQPH VGCHLPVFAE LFWLHQLLRH SLPSLLALRG240

(2) INFORMATION ON SEQ ID NO. 658:

(i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 162 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 658:

EHNSKSSFIN IKRAYLAKDT QIKESLWLRT QGREVPGLCP CWARRRLGTK WEKCWEGLSG 60
 RGHKSSGGQH CRQVMGGTHG DLAANSCCGG VSLVLP PGGP LLGSRGPTK GHRTGSPGWL120
 VOLG MKAREK RVLCSGRIGP DAEAEALPVT CGRSALSLPG TL 162

(2) INFORMATION ON SEQ ID NO. 659:

(i) SEQUENCE CHARACTERISTIC:
 (A) LENGTH: 148 amino acids
 (B) TYPE: Protein
 (C) STRAND: individual
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: ORF

(iii) HYPOTHETICAL: yes

(vi) ORIGIN

(A) ORGANISM: HUMAN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 659:

RLWTA FHGLR AGDEATRRPG LPEHLHGPAV SHRGDQ RDP AYLCWQQRH GAPEERYHPC 60
 PGPSQ RVPGR DRAERPHVTG SASASAGPI RPLQSTRFSL AFIP SCTNHP GLPVLCPLVG120
 PLQEPRSGPP GGSTKDT PPQ QELAARSP 148